# CATALOGUE

OF THE

# ARKANSAS INDUSTRIAL UNIVERSITY.

TWENTY-FIFTH EDITION.



(UNIVERSITY POST OFFICE, FAYETTEVILLE, ARK.

1897-98.

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# CALENDAR, 1898-99.

#### FAYETTEVILLE.

1898

SEPTEMBER 14, WEDNESDAY—First term begins.
SEPTEMBER 14-17—Entrance examinations.
NOVEMBER 24, THURSDAY—Thanksgiving, a holiday.

#### 1899

JANUARY 20, FRIDAY—First term examinations begin.
JANUARY 28, SATURDAY—First term ends.
JANUARY 30, MONDAY—Second term begins.
MAY 29, MONDAY—Decoration day, a holiday.
JUNE 1, THURSDAY—Second term examinations begin.
JUNE 3, SATURDAY—Decoration day, a holiday.
JUNE 11, SUNDAY—Baccalaureate sermon.
JUNE 15, THURSDAY—Annual commencement.

#### MEDICAL DEPARTMENT, LITTLE ROCK.

1898.

OCTOBER 13, THURSDAY-Regular session begins.

1899.

APRIL 13, THURSDAY-Session ends.

#### LAW DEPARTMENT, LITTLE ROCK.

898.

OCTOBER 3, MONDAY-Fall term begins.

1899

JANUARY 30, MONDAY—Fall term ends.

JANUARY 31, TUESDAY—Spring term begins.

JUNE 1, THURSDAY—Spring term ends.

# BRANCH NORMAL COLLEGE, PINE BLUFF.

1898

SEPTEMBER 6, TUESDAY-Session begins.

1899.

JUNE 2, FRIDAY-Session ends.

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<sup>\*</sup>Term expired February 28, 1898; succeeded by William Porter Stone (First Lieut. 6th Artillery, U. S. A.).

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LORENZO ELLIS, Engineer.

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ROBERT R. DINWIDDIE, M. D., Pathologist and Mycologist.

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JOHN TURNER STINSON, B. S., Horticulturist,

CLIFFORD LEWIS NEWMAN, B. S., Agriculturist.

JOHN FRANKLIN MOORE, B. S., Assistant Chemist.

GEORGE B. IRBY, B. A.,
Assistant Agriculturist at Newport.

# THE UNIVERSITY AND THE STATE.

The University is at the head of the public educational system of the State of Arkansas. It seeks to foster the higher educational interests of the State, broadly and generously interpreted, and to make provision for the demands of advanced scholarship in as many lines as its means will permit. It is the aim of its Faculty and Board of Trustees, from year to year, to bring it into still closer articulation with the public schools of the State, and in connection with them to afford to all the youth of either sex ample facilities for liberal education in literature, science and the industrial arts, and for the professional studies.

Through the aid received from the United States and from the State of Arkansas, the University is enabled to offer to its students free tuition, except in the studies of Law, Medicine and Music, and thus to open wide her doors to all seekers of learning.

The institution was established by virtue of an act of Congress donating public lands for educational purposes, and in accordance with an act of the General Assembly of this State carrying out the object of said donation.

# LOCATION.

The University, except its Medical and Law Schools and Branch Normal College, is located at Fayetteville, Washington County, Arkansas. Situated in the heart of the Ozark Mountains, it is more

than 1,500 feet above the sea level. The location is thought to be unsurpassed in salubrity of climate, in beauty of surrounding scenery, in variety and perfection of agricultural and horticultural productions, and in the morality and intelligence of its people.

Students may reach Fayetteville from both the north and the south by the Texas branch of the St. Louis and San Francisco Railroad, which has three trains daily each way, and various connections with other roads both north and south.

# BUILDINGS.

#### UNIVERSITY HALL.

This is a brick structure with cut stone trimmings and a stone foundation. It is four stories in height above the basement. It consists of a front building 214 feet in length, and two wings, each 124 feet in depth, the whole forming three sides of a quadrangle. This building contains a large number of class rooms, Chapel, Library and Reading Room, separate Study Halls for the boys and girls of the Preparatory Department, Armory, Magazine, Band Room, Laboratories for Engineering, Biology and Geology, Music and Art Rooms, President's and Commandant's Offices, Natural History Museum, Examination Hall, Literary Society Halls, Toilet Rooms, etc., in all seventy rooms, together with broad corridors and stairways. The building is heated by steam, lighted by electricity, and supplied with water from the city waterworks.

#### SCIENCE HALL.

This building, designed especially for the departments of Chemistry and Physics, was erected in 1893; it is a substantial two-story brick building, 50 x 60 feet. On the first floor are the lecture rooms of the two departments, the physical laboratory and storeroom, and also the private laboratory of the professor in charge. On the second floor are the chemical laboratories, including a laboratory for general chemistry, a laboratory for qualitative analysis, and a laboratory devoted to quantitative analysis; also a storeroom for chemical supplies, a weighing room, and a hallway. The building is supplied with gas, water, and steam heat, and with the best modern appliances for technical work. It will accommodate about 100 students.

#### DORMITORIES.

The North Dormitory is a two-story frame building. It contains a dining hall, kitchen, storerooms, and on the second floor a number of rooms for students.

The South Dormitory is a substantial and handsome brick building, three stories high and containing over forty rooms. It is favorably located with a view to the health of the occupants, convenience of access to University Hall, and sightliness of appearance on the grounds. The rooms are large, well ventilated and lighted, and open into broad corridors extending lengthwise through the building. From a wide veranda in front, there are three entrances to the building. There are also two rear entrances, and on the third floor a suite of rooms fitted up for an Infirmary. Through the generosity of the ladies of Fayetteville, this suite of rooms has been thoroughly equipped. For the support of the Infirmary the Legislature of 1897 appropriated the sum of \$250.

#### AGRICULTURAL BUILDINGS.

The main building of the Agricultural Experiment Station is of brick, one story in height. It contains several offices; the laboratories of the Chemist, the Horticulturist, and the Bacteriologist; the Station Museum, and several commodious storerooms. Belonging to the Department of Agriculture are a large barn, stock shed, dairy house, and other necessary outbuildings.

#### HORTICULTURAL BUILDINGS.

During the present year a plant house has been erected. It is 60x23 feet, is heated by steam and supplied with improved ventilating apparatus and other modern conveniences. Attached to the plant house is a building 24x20 feet which is designed to be used as a laboratory for plant study. The equipment thus provided will furnish much-needed facilities for study and research to all persons interested in plant life, and especially to students of horticulture.

The buildings are located north of University Hall, and, together with the improvement of the adjacent grounds, add much to the sightliness of that part of the campus,

#### THE SHOPS.

The shop building is of brick with stone foundation and iron roof, and has a floor space of 8,000 square feet. It contains a wood room 80x40, a foundry 35x40, forge shops 32x40, a machine shop 40x48, and a boiler room 32x35. There is also a brick building 15x35, divided into two rooms, without communication, one of which is used for an office and the other for the storage of oil and paint; also a frame coal bin 12x30, covered with iron and accessible to teams from either side. The new buildings are heated by steam and provided with water from the city waterworks and with fire hose. They will accommodate about 100 students in class work at one time

#### THE LIBRARY.

The Library occupies the north wing of the main building, second floor. It now contains over 7,000 volumes, with numerous pamphlets, maps, charts, etc. Shelves are provided for 14,000 volumes, with room for expansion.

The alcoves are separated from the library hall by an iron railing; and only advanced students are permitted to have direct access to the shelves. The general reference works, however, are outside the railing.

The Dewey decimal system of classification and the Cutter book-numbers are used, thereby simplifying the circulation of books and the general care of the Library. The leading high class periodicals (including magazines, reviews and various technical monthlies) are regularly taken, and are bound as they accumulate. This vast fund of current literature is rendered more useful and accessible by "Poole's Complete Index" to periodic literature from 1802 to the present time. A number of daily and weekly papers also come to the Library.

Among the works of general reference in the Library are all the best encyclopedias and dictionaries.

The card catalogue in preparation will greatly facilitate reference and will also greatly increase the usefulness and popularity of the Library.

The privileges of the Library are free to all students.

There are also Special Libraries belonging to various departments, comprising some 1,500 volumes.

# THE ARMORY.

The Armory is a large, well lighted room, 60x80 feet, occupying the entire basement of the north wing of the main building. It is substantially fitted up with arm racks, compartments for equipments, and other conveniences. Two adjacent rooms are assigned to the Military Department, and are used as band room and storeroom.

The equipment of the department consists of 275 Springfield Cadet Rifles, of the same model as those used at the United States Military Academy at

West Point, 275 sets of infantry equipments, twentyone cadet swords, West Point pattern, National colors, flags, signal equipment, tents, ammunition, etc., and a superior set of band instruments.

The arms and equipments are furnished the University by the general government, and the tents are loaned the Department by the State. The other equipments have been purchased by the University and belong to the Military Department. The equipment is sufficient for a battalion of 350 cadets.

#### THE MUSEUM.

The Museum occupies the fourth floor of the south wing of the main building. Large additions have recently been made to the equipment of the Museum with a view to facilitate instruction in geology and also to make it of increased interest to the visiting public. That portion of the collection suitable for display is arranged in glass cases, while the working collection is in drawers. Several new sloping-top cases with drawers beneath have recently been added.

Relief Maps.—For illustration in geology, and general interest to the public, there have been placed in the Museum, the following relief maps: Geological relief maps of the State of Arkansas, Colorado Canon, and the United States; a convex-relief map of the United States on a section of a globe 16 feet in diameter; a relief map of Carmel Bay, California; Ice Spring Craters, Utah; Yosemite

Valley, Palestine, Mount Vesuvius, the State of California, and San Francisco Peninsula. A relief map of a portion of the State of Tennessee is now in preparation.

The Mineral Collection.—The mineral collection contains about 2,000 specimens, representing the different mineral groups. Many of these specimens are displayed in cases.

The Petrographic Collection.—The most valuable part of this collection consists of the series furnished by the United States Geological Survey, representing sedimentary, igneous and metamorphic rocks. Besides this, there is a valuable collection of building and other stones from different parts of the country.

The Paleontological Collection.—There is a large collection of fossils in the Museum, but as they have not yet been arranged and catalogued, the number of specimens cannot be even estimated.

The Major Earle Collection.—Major F. R. Earle has deposited in the Museum his private collection of minerals and fossils. This collection was formerly in Cane Hill College.

The Zoological and Botanical Collection.—This collection consists of 200 birds and mammals, representing 80 species; 200 reptiles and amphibians, representing 40 species; 1,500 fishes, representing 350 species; 1,000 insects and other invertebrates, representing 200 species; several skeletons.

The Museum will gratefully acknowledge donations of various objects, and the donors may be sure

that anything of value sent to it will be carefully preserved and duly credited to the donor. Collections in the hands of private parties are likely to be soon scattered or spoiled through lack of care or improper handling. The Museum is now prepared to receive collections on deposit, and to preserve and display them under the owner's name until called for. In this way owners of interesting collections are usually much more certain of having their collections permanently preserved, and the collections will be seen by more people and become more useful.

While our Museum is most important on account of its educational value, at the same time it serves an important purpose in representing the resources of this State. Any donations to the Museum will be highly appreciated.

# THE LABORATORIES.

In the laboratories of the University opportunities are afforded for practical instruction in Chemistry, Mineralogy, Physics, Botany, Zoölogy, Entomology, Horticulture, and in Civil, Mechanical, and Electrical Engineering.

#### CHEMICAL LABORATORIES.

The laboratories for chemical work are four in number and are situated in Science Hall. The Laboratory of General Chemistry is furnished with desks capable of accommodating thirty-five students. Each desk has a cupboard and two drawers, and is provided with gas and water. The Qualitative Laboratory has desks for sixteen students. Each desk is provided with suitable conveniences for taking care of apparatus and is supplied with all the common reagents. The room is provided with a hood and other equipments usually found in qualitative laboratories. The Quantitative Laboratory has suitable accommodations for eight students, and, beside the usual equipments, a Blake ore crusher and an assay furnace. Adjoining the Quantitative Laboratory is the weighing room, which contains two of Becker's best analytical balances, besides a number of less accurate instruments suitable for weighing large quantities of chemicals. The storeroom contains all the apparatus and chemicals. The room is in charge of an assistant, who gives out the supplies and keeps the books. This room contains the apparatus for preparing distilled water, and has also some space for laboratory work,

#### PHYSICAL LABORATORY.

The Physical Laboratory is a room 20x40 feet and is provided with large tables suitable for use in performing experiments in General Physics and physical measurements. It has also two pillars built up from the ground and independent of the rest of the building for the accommodation of delicate instruments which would otherwise be disturbed by the vibrations of the floor. The storeroom of physical apparatus is supplied with instruments suitable for illustrating the principles of Physics and for the use of students in practical work.

#### BIOLOGICAL LABORATORY.

The Biological Laboratory will accommodate about fifty students. It is well equipped with microscopes, microtomes, micro-chemical reagents, and the special apparatus for bacteriological work. A large aquarium furnishes means for the preservation of living animals for classes in Zoölogy. All the apparatus necessary for the collection, mounting and preservation of plants and insects is supplied in abundance. Each table is supplied with gas and distilled water, and each student with all the chemicals and apparatus needed in botanical and zoölogical dissections, and in the hardening, sectioning, staining and mounting of material for histological work. Within the last year a thoroughly equipped dark-room for photographic and micro-photographic work, an entomological laboratory for advanced students, and a complete set of anthropometric apparatus have greatly increased the facilities for teaching the natural sciences.

#### GEOLOGICAL LABORATORY,

The Geological Laboratory is provided with aneroid barometers, compasses, hand levels, pedometers, etc., for field work, two petrographic microscopes, and an excellent equipment of drawing apparatus for the construction of geological sections and topographic maps; also, with apparatus for the construction of relief maps.

There is a well-equipped laboratory f r Determinative Mineralogy, and a room for the prej aration

of relief maps and other work connected with the department of geology.

#### MECHANICAL ENGINEERING LABORATORY.

The three boilers used to heat the buildings and run the shops furnish ample facilities for testing the evaporative power of boilers, and the fuel consumption per pound of water evaporated. Comparative tests of feed pumps and injectors are made. There is a complete set of calorimeters, thermometers, engine counters, engine indicators, measuring tanks, injectors, feed-water heaters, and all necessary apparatus for making engine and boiler tests. A Westinghouse, a Reynolds-Corliss, an ordinary slide-valve, a horizontal and a vertical engine furnish all necessary apparatus for practice in valve setting and examples of steam engines.

A 60,000-pound Riehle testing machine is used to give the student practice in testing the strength of materials of construction. It was used the past session in making tests of bridge material for Kansas City, Pittsburg & Gulf Railroad, and also in testing the material in the boilers at the Branch Normal shops and the boilers at present in the University shops.

#### ELECTRICAL LABORATORY.

The Electrical Laboratory affords excellent facilities for experimental work with practical dynamoelectric machines. In the laboratory will be found the leading types of machines for arc and incandescent lighting and for power; constant current and constant potential motors, and generators, representative of the different methods of power transmission; a Kelvin balance, standard cells, and a potentiometer for standardizing measuring instruments; Weston and other voltmeters and ammeters; electro-dynamometers; galvanometers of the tangent, reflecting, and Deprez-d'Arsonval types; magnetometers; standard resistance coils and bridges, and absorption dynamometers.

During the past year there have been added two Kelvin voltmeters, a D. C. A. C. polyphase motor-generator, with a large number of smaller pieces of apparatus.

The laboratory has been entirely remodeled, a substantial double floor relaid, and stone foundations provided for all machinery. Two brick piers were built for supporting delicate measuring instruments.

This apparatus enables the student to carry on experimental work of a very wide range, and to attain practical proficiency in operating and testing electrical machinery and instruments.

Students are also allowed to inspect the plant of the Fayetteville Electric Light and Power Company, and to take measurements and make tests on it. The Electrical Laboratory is connected with their primary mains, and is thus supplied with alternate currents of 2,000 volts potential for experimental work. CIVIL ENGINEERING LABORATORY AND EQUIPMENT.

The Civil Engineering Laboratory is provided with all necessary instruments for work in land, railroad and city surveying. The equipment of field instruments has been selected so as to afford students the opportunity of becoming familiar with the instruments of different manufacturers. Among the usual field instruments there are a number of engineers' transits, theodolite, Y levels, transit with solar attachment, compasses, hand levels, standard and ordinary steel tapes, aneroid barometers, plane table, sextant, etc. During the last year there has also been added for astronomical work and triangulation, a large Altazimuth reading to seconds by levels and micrometers.

#### CEMENT LABORATORY.

The importance of tests of the strength of mortars and cements is very great. The equipment for this purpose includes one 2,000-pound tensile testing machine, standard consistency apparatus, Vicats's and Gilmore's needles for determining set, metal molds for tension, compression and transverse test-pieces, steaming apparatus for blowing tests, and sieves for fineness.

# SHOP EQUIPMENT.

The machine shop contains a Westinghouse engine, which runs the machinery in the whole building, a large iron planer, a shaper, four lathes of different sizes and makes, drill press, two grinding machines, milling machine, 60,000-pound testing machine, and a good supply of hand tools, benches and materials.

The forge shop contains twelve Buffalo forges with down draft which takes the smoke away through underground pipes, thus avoiding the smoke and dirt of the ordinary blacksmith shop. It also contains a shearing and punching machine, twelve anvils of different weights, and all the necessary blacksmith tools for the twelve forges.

The wood shop contains one buzz planer, one large cylinder planer, circular saw, band saw, double spindle shaper, mortising and boring machine, five smaller lathes, one 18-inch pattern maker's lathe and eighteen benches, each equipped with a complete set of carpenter's tools.

The foundry contains one Colliau cupola with a capacity of about three-quarters of a ton of iron per hour and one brass furnace of about 150 pounds capacity. The foundry is also equipped with all the necessary molder's tools.

The boiler room contains two 75-horse power boilers, one 40-horse power boiler, feed pump, injectors, feed-water heater, measuring tanks, calorimeters, engine counters, engine indicators, thermometers, etc., including all the necessary apparatus for making engine and boiler tests.

The various departments of the shop building afford facilities for giving practical instruction to sixty or seventy students at one time.

Among the facilities for instruction in engineering contained in the equipment of the University in addition to the shop equipment may be mentioned:

A Dean steam pump with air chamber, water and steam cylinders, and valve chambers sectioned, so that a student may see the working parts.

A Cameron steam pump with the steam cylinder sectioned, showing the valve motion.

A Knowles pump in full working order.

A Blake steam pump in section.

Two small steam engines, one horizontal and one vertical, made by the students in the shop.

A fire hydrant in working order.

A set of three successive portions of plate from a boiler showing effect of scale in producing overheating and bagging.

Samples of articles of manufacture form a large part of the collection, and are found to be of great service in acquainting students with the construction of such articles. Among these may be mentioned Stevenson's link motion, safety valves, fuse plugs, wheel trains, link belting, steampipe covering, grease cups, injectors in sections, water meters, insulated wire, lead cables, and lubricating oils. Models of a large number of machines of various kinds are also in the collection.

# DRAWING ROOM.

The equipment includes the usual tables and stools; and among the special apparatus and instruments may be mentioned the planimeter, pantograph, blue-print frame, traverse table, odontograph, slide

rule, sets of railroad and machine curves, roof pitches, etc. A blue-print room has recently been fitted up with complete facilities for the details of the blue-print process. The room is also provided with photographic apparatus which will be used to prepare lantern slides and prints illustrating various branches of engineering.

#### ART ROOM.

During the year a commodious art room has been provided and furnished with such appliances as are needed for efficient work in that department.

# CONDITIONS OF ADMISSION.

Candidates for admission are urged to be present at the beginning of the session. Admission at a later date is not refused, but is attended with greater or less inconvenience.

Students on their arrival in Fayetteville should report promptly to the President. Needless delay in reporting or unseemly conduct may justify exclusion from the University.

Applicants should present certificates of honorable discharge from the school last attended, or furnish other testimonials of good moral character.

# ENTRANCE EXAMINATIONS.

All applicants for admission, except those who present certificates from accredited schools, are expected to pass satisfactory examinations in the studies preliminary to those which they propose to take up.

A student who presents a certificate of scholarship from a high school, academy, or college, not on the list of accredited schools, is required to take such examinations as may be prescribed. The result of such examinations, together with the certificates, will be passed on and proper credit allowed by the professors of the departments which such student proposes to enter.

Examinations for admission to the Freshman class will be held in the following subjects:

- 1. English. The admission requirements in English are those of the American Association of Colleges, and most of the leading institutions in the United States. The examination is divided into two parts.
- (a) Reading and Practice. A few books are assigned for reading. The candidate is required to present evidence of a general knowledge of the subject-matter of these books, and to answer simple questions on the lives of their authors. The form of the examination will usually be the writing of a paragraph or two on each of several topics set in the examination paper. The treatment of these topics is designed to test the candidate's power of clear and accurate expression, and calls for only a general knowledge of the substance of the books. In place of a part or the whole of this test, the candidate may present an exercise book, properly certified by his instructor, containing compositions or other written work done in connection with the reading of these books.

The books set for this part of the examination are: 1898-1899—Milton's Paradise Lost, Books I. and II.; Pope's Ihad, Books I. and XXII.; the Sir Roger de Coverley Papers in The Spectator; Goldsmith's Vicar

of Wakefield; Coleridge's Ancient Mariner; Southey's Life of Nelson; Carlyle's Essay on Burns; Lowell's Vision of Sir Launfal; Hawthorne's House of the Seven Gables.

1899-1900—Goldsmith's Vicar of Wakefield; Lowell's Vision of Sir Launfal; Cooper's Last of the Mohicans; Coleridge's Ancient Mariner; Hawthorne's House of the Seven Gables; Dryden's Palamon and Arcite; Pope's Iliad, Books I., VI., XXII., and XXIV.; the Sir Roger de Coverley Papers in The Spectator: De Quincey's Flight of a Tartar Tribe.

1900-1901—Goldsmith's Vicar of Wakefield; Cooper's Last of the Mohicans; Lowell's Vision of Sir Launfal; Dryden's Palamon and Arcite; Pope's Iliad, Books I., VI., XXII., and XXIV., the Sir Roger de Coverley Papers in The Spectator; Scott's Ivanhoe; De Quincey's Flight of a Tartar Tribe; Tennyson's Princess.

(b) Study and Practice. Other books are assigned for more careful study. The examination upon these books covers subject-matter, form, and structure, and also tests the candidate's ability to express his knowledge with clearness and accuracy.

The books set for this part of the examination are:

1898–1899—Shakespeare's Macbeth\*; Burke's Speech on Conciliation with America; De Quincey's Flight of a Tartar Tribe; Tennyson's Princess.

1899-1900—Burke's Speech on Conciliation with America; Carlyle's Essay on Burns; Shakespeare's Macbeth\*; Milton's Paradise Lost, Books I, and II.

<sup>\*</sup>Julius Cæsar will be accepted.

1900-1901—Burke's Speech on Conciliation with America; Macaulay's Essays on Milton and Addison; Shakespeare's Macbeth\*; Milton's Paradise Lost, Books I, and II.

In order to pass this examination, a student must have a good practical knowledge of English Grammar (as much as is contained in Maxwell's English Grammar), and of an elementary Rhetoric such as Raub's, Waddy's or Williams's; and no candidate will be accepted whose work is notably defective in point of spelling, punctuation, idiom, or division into paragraphs.

- 2. Arithmetic. The examination will be taken from Wentworth's Grammar School Arithmetic, the whole of which is required. Teachers preparing candidates for entrance should, in teaching arithmetic, require them to analyze every example capable of analysis, or give a thorough course in Mental Arithmetic. Students who are not quick at analysis in Arithmetic usually make poor progress in higher Mathematics.
- 3. A gebra. To Simultaneous Quadratic Equations, with special attention to factoring, the theory of exponents, and radicals. The examination will be taken from Wentworth's Higher Algebra.
- 4. Plane Geometry. The first four books of Phillips and Fisher's Geometry. In 1899 all of Plane Geometry will be required for admission to the Freshman class.
- 5. History. The examination will be taken from Chambers's History of the United States and Barnes's General History.
- 6. Geography. Any complete manual, such as Maury's or Frye's, will give the preparation, if thoroughly mastered. Special attention is given to the geography of the United States and of Arkansas.

<sup>\*</sup>Julius Cæsar will be accepted.

- 7. Physiology. Martin's Human Body, briefer course.
- 8. Latin. Collar and Danieli's Beginner's Latin Book; the first twenty-five lessons in Bennett's Latin Composition; Cæsar's Gallic War, four books, with questions on grammar and on the subject-matter, military equipment, etc. Lowe and Ewing's Cæsar is recommended. Latin is not required for admission except of Normal students and of those who are candidates for the degree of Bachelor of Arts.

Candidates for any class above the Freshman, or for the Freshman class after the beginning of the session, will be examined also in the subjects passed over by the class.

Students are advised to come prepared for all the studies in some one class, otherwise, their course is necessarily more or less irregular.

# ORDER OF EXAMINATIONS FOR ADMISSION.

Wednesday, September 14.—9 a. m., registration of students; 1 to 3 p. m., Geometry; 3 to 4 p. m., Physiology.

Thursday, September 15.—1 to 3 p. m., Algebra; 3 to 4 p. m., Geography.

Iriday, September 16,-9 to 12 m., Arithmetic: 1 to 4 p. m., Latin.

Saturday, September 17.—9 to 11 a. m., English Grammar and Analysis; 11 to 12 m., English Composition, Reading; 1 to 2:30 p. m., U. S. History; 2:30 to 4 p. m., General History.

# EXAMINATIONS AT PLACES OTHER THAN FAVETTE-VILLE,

Students living at a distance from the University may obtain special local examinations if applied for in due time before the beginning of each session. The questions will be sent on application to the principal of any school or to any county examiner. The questions must be submitted by the principal or county examiner to the candidate under the usual restrictions of a written examination, and the questions and answers must be returned by the same officer to the University with his indorsement that the examination was properly conducted.

#### ADMISSION ON CERTIFICATES.

The graduates of accredited schools are admitted to the Freshman class in the University without examination. Students of accredited schools who are not graduates may be exempt from entrance examinations in studies in which their proficiency is duly certified. The Faculty reserve the right to require of students of accredited schools entrance examinations in subjects in advance of the Freshman class. In all cases certificates from the principal of the school attended should be presented containing specific statements of the kind and extent of work done in the studies in which credits are desired. Blank forms for such certificates will be furnished by the University.

#### ACCREDITED SCHOOLS.

On application from the principal of any high school, academy, or other institution, an officer of the University will visit and examine the organization and work of such school. The points to be observed are the subjects included in the course of study, the extent of instruction in each subject, the text-books used, the length of the session, length of the recitation hours, methods of teaching, facilities for instruction, and the discipline. Upon a favorable report, submitted in writing by the visiting officer, the school is declared by vote of the Faculty duly accredited to the Freshman class of the University.

Any changes that may occur, especially in the principalship of the school, or in its course of study, should be reported to the President of the University, as the list of accredited schools is subject to yearly revision.

The University earnestly desires to cultivate friendly and harmonious relations with all other educational enterprises of the State, and to add to its list all schools that are doing the required work and that desire to assume the accredited relation.

#### LIST OF ACCREDITED SCHOOLS.

Fort Smith High School, Principal, B. W. Torreyson.
Rogers Academy, Principal, J. W. Scroggs.
Little Rock High School, Principal, R. C. Hall.
Marianna Institute, Principal, T. A. Futrall.
Lonoke High School, Principal, J. J. Doyne.
Pine Bluff High School, Principal, J. H. Witherspoon.
Judsonia High School, Principal, W. W. Condray.
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Paris High School, Paris, Tex., Principal, J. G. Wooten. Hinemon University School, Monticello, Ark., Principal, J. E. Erwin.

Garnett High School, Garnett, Kan., Principal, F. McClellan.
Little Rock Academy, Principal, W. H. Tharp.
Helena High School, Principal, W. W. Rivers.
Hot Springs High School, Principal, Geo. B. Cook.
Amity High School, Principal, S. M. Samson.
Harrison High School, Principal, C. L. Scott.
Neosha Public School, Principal, J. M. Stephenson.
Arkansas Normal School, Sulphur Rock, Ark., Principal, J.

Arkansas Normal School, Sulphur Rock, Ark., Principal, J. W. Decker.

Paris Academy, Principal, G. S. Minmier, Paris, Ark.
Dardanelle High School, Principal, P. L. Burrow, Dardanelle, Ark.

Russellville High School, Principal, E. L. Gatewood, Russellville, Ark.

Eureka Springs High School, Principal, C. S. Barnett, Eureka Springs. Ark.

Southwestern Academy, Magnolia, Ark., Principal, J. W. Cantwell.

Texarkana High School, Principal, Allen Winham.
Hope High School, Principal, R. A. Hearon.
Thompson's Classical Institute, Paragould, Ark., Principals, R. S. Thompson and G. R. Hopkins.

Jonesboro Training School, Principal, F. R. Alexander. Prairie Grove High School, Principal, C. N. Weems.

# SELECTION OF COURSES OF STUDY.

Students are allowed all reasonable freedom in choosing their courses of study. But they are required to pursue their studies in the order prescribed, and, when candidates for a degree, to complete all the subjects in the course leading to such degree as a condition of graduation. Changes in the courses of study selected are discouraged, but for sufficient reasons are allowed if made within three

weeks after admission; subsequently no such change can be made during the session except by the express permission of the Faculty.

#### NUMBER OF RECITATIONS.

Not less than twelve, nor more than eighteen recitations or their equivalent per week, exclusive of military science and tactics, are allowed, except by permission of the Faculty. Two hours of laboratory, shop or farm work, drawing or sight reading, are counted equivalent to one recitation. If less than twelve recitations or their equivalent per week are specified in any course, studies must be elected to make up the deficiency. Electives taken from the studies of a class one year below have full value, otherwise their value is fixed by the Faculty.

#### CLASSIFICATION OF STUDENTS.

The satisfactory completion of the work of a class as attested by daily recitations and examinations is the condition of enrollment in a higher class. Some margin, however, is allowed for making up studies in arrears. But more than six hours per week required for such studies or more than six hours per week omitted from the studies of a given class prevents enrollment therein, except that in the engineering courses the number in both cases may be as many as eight. No student can be classified a Freshman in any course who has more than six hours per week of unfinished preparatory work.

#### SPECIAL STUDENTS.

- I. Students are advised to pursue in all cases in which it is practicable some one of the regular courses leading to a degree. The number of these courses with the liberal provision for electives allows sufficient play for individual preference in the selection of subjects required for a liberal and well rounded education.
- 2. But students who are not candidates for a degree, but who have completed all the studies below the Freshman class, may elect a special course of study subject to the approval of the professor in charge of the major subject chosen.
- 3. Persons of mature age (not less than 21 years of age) may elect a special course of study under the direction of the Faculty, provided they show by examinations or otherwise that they are qualified to pursue profitably the studies which they propose to take up.
- 4. Students in special courses are subject to the same regulations and to the same examinations in the studies pursued as all other undergraduate students.

#### EXAMINATIONS.

1. Examinations, chiefly in writing, are held near the end of each term. The grades are determined by combining the values of the daily recitations and of the examinations, and are divided into five groups, as follows: "Excellent" (E); "Good" (G); "Fair" (F); "Poor" (P); "Bad" (B). A

grade not lower than "Fair" is required for a "pass," which is the equivalent of about 75 per cent. At the end of each term a report is made to the parent or guardian of each student showing his progress, general conduct, etc.

- 2. If a student has failed in any study, he may nevertheless be allowed to take up the next study in advance, provided he be deemed by the professor in charge of the department to which such study belongs, not incompetent to pursue it; but he will be required to pass a satisfactory examination in the study in which he failed, or take it up with the next class.
- 3. If a student has proven competent to continue his advanced work, but has not completed all the preceding studies in his course, he must resume the latter, and if he be found to be overworked, he will be required to drop a part of his advanced work.

### APPOINTMENT OF BENEFICIARIES.

An act of the General Assembly of the State of Arkansas "To Regulate the Appointment of Beneficiary Students in the Arkansas Industrial University and to Amend Section 4088 of the Digest of the Statutes of 1894," approved April 19, 1895, reads as follows:

"Section 4088. It shall be the duty of the Board of Trustees to apportion the number of beneficiaries who shall be admitted as students in the University, without tuition, among the several counties of the State, according to population, and to notify the

county judge of each county of the number apportioned to the county at least two months prior to the beginning of each regular annual session of the school; and it shall be the duty of the county judge to appoint from the actual residents of the county the number of beneficiaries to which it may be entitled, a preference being given to those noted for diligence and proficiency in study; and the appointment so made shall be entered of record. If the judge of any county shall fail to appoint its quota of beneficiaries, or if those appointed shall fail to attend. the president of the University shall appoint such beneficiaries to the full number authorized by law from other counties having their full quota; Provided. such appointments shall be vacated on application of the county judge of a county so failing to fill its quota."

### NUMBER OF BENEFICIARIES.

The number of beneficiaries fixed by the Board of Trustees is 1,000, distributed to the counties of the State in proportion to the population.

There is also one "Honorary Scholarship" to each county, to be awarded for superior merit and proficiency, from the public schools of each county, according to section 2, of act of July 23, 1808.

All the beneficiary students should be present if practicable at the opening of the first term

Appointments of beneficiaries are made for a period of four years; but failure to enter the University within a reasonable time, or absence from the

University for a year or more forfeits the appointment. Withdrawal at any time during the session may be construed to forfeit an appointment. A student may be reappointed after an appointment has expired or been forfeited, but in such case the matriculation fee is paid again.

### QUALIFICATIONS.

The attention of county judges is called to the following requirements for admission to the lowest preparatory class:

- I. The Grammar School Arithmetic,
- 2. Maxwell's Elementary Grammar and Composition.
- 3. The whole of some Complete Manual of Geography.
  - 4. Proficiency in spelling, reading and writing.

It is highly important in making appointments to note carefully these requirements; otherwise students coming to the University unprepared incur needless expense and go away disappointed and often discouraged.

## FORMS OF APPOINTMENT.

Students who have been appointed beneficiaries must bring evidence of appointment in the following form, to be sent by the judge of the county court, in accordance with the sixth section of an act approved March 6, 1875.

	[Form 1—Appointment.]
No	[To be given to the student.]
To wi	HOM IT MAY CONCERN:
	I hereby appointofof
State	of Arkansas, as a beneficiary to the Arkansas Industrial
Unive	rsity.
	Given under my hand thisday of
	Send a notice like the following to the Presi-
dent	of the University, and one to the Secretary of
the E	Board of Trustees, at Fayetteville:
	[Form 2-Notice to President of University.]
	}
To the	
	I hereby notify you that I have this day appointed
	sas Industrial University.
	· ·
	Given under my hand this day of189

- 1		-	
Counties.		Counties.	
			-
Arkansas	10	Lee	16
Ashley	13	Lincoln	12
Baxter	7	Little River	6
Benton	2.1	Logan	19
Boone	15	Lonoke	15
Bradley	8	Madison	
	7		15
Calhoun	16	Marion	
Carroll		Miller	12
Chrot	12	Mississippi	9
Clay	13	Monroe	12
Clark	15	Montgomery	7
Cleburne	8	Nevada	17
Cleveland	10	Newton	6
Columbia	19	Ouachita	15
Conway	16	Perry	6
Craighead	8	Phillips	28
Crawford	I I	Pike	3
Crittenden	11	Poinsett	7
Cross	6	Polk	3
Dallas	9	Pope	19
Desha	II	Prairie	10
Drew	15	Pulaski	45
Faulkner	17	Randolph	12
Franklin .	18	Saline	11
Fulton	8	Scott	19
Garland	1.1	Searcy	7
Grant	S	Sebastian	28
Greene	9	Sevier	8
Hempstead	2.1	Sharp	12
Hot Spring	10	Stone	
Howard	1.2	St. Francis	10
Independence			16
	21	Union	
Izard	1.4	Van Buren	11
Jackson	15	Washington	30
Jefferson	29	White	21
Johnson	15	Woodruff	12
Lafayette	6	Yell	18
Lawrence	10		

### FEES AND EXPENSES.

Beneficiary students pay no tuition except in Music. (For terms in Art and Music, see Departments of Art and Music.

Matriculation charged all new students\$	5.00
Tuition per year to non-beneficiary students	30.00
Contingent fee, after first year	3.00
Furniture for dormitory students, from\$6 00 to	15.00
Board in dormitory at cost, per month, from \$ 8 00 to	9.50
Board in private families, per month, from\$10 00 to	15.00
Uniform, including cap, purchased by male students,	
from\$13.00 to	15.00
Washing, per month, from\$1.00 to	0 1.50

The necessary expenses of a student who wishes to live cheaply are:

Board in dormitory, 9 months, about\$	80.00
Washing, 9 months, about	9.00
Furniture, first year, only \$6,00 to	
Matriculation, first year, only	5.00
*Contingent fee, after first year	3.00
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A diploma fee of \$5.00 is charged all graduates. All dues are to be paid or satisfactorily adjusted before diplomas are conferred.

Rooms in the University dormitories are free, but occupants provide their furniture, fuel, and lights. Students leaving the University frequently sell their furniture at a small reduction. If there are not

<sup>\*</sup>By act of the General Assembly of Arkansas a student appointed a beneficiary and credited to a county of which he was not a resident at the time of such appointment, is required to pay a contingent fee of \$10 per year.

rooms enough for all, preference is given to Arkansas students. An officer of the University is in charge of the building, and the rooms are inspected by the Faculty whenever deemed necessary.

Students boarding elsewhere are under the supervision of the President of the University, and are allowed to board only at places approved by him, and to change boarding places only with his consent.

### BOARD FOR YOUNG LADIES.

Sufficient funds have not yet been secured to provide a dormitory for young ladies, but all necessary assistance is rendered them in finding homes in private families in the town. Parents, therefore, who send a daughter to the University, should place her under the control of the family with whom she boards, subject to the general supervision of the President of the University.

## ABSENCES AND WITHDRAWALS.

Absences from the University during the session are not permitted except for valid reasons. The right of a parent to withdraw his son at any time, without reason assigned, is recognized; but without so withdrawing him, he cannot relieve him of the obligation to attend to his duties at the University. The incidental absences of students during the session are exceedingly disadvantageous, both to themselves and to the University. While, therefore, the Faculty permit them, in cases where propriety or urgent necessity seems to make them unavoidable, they

hold it to be a duty to inquire into the reasons for which the permission is solicited.

Parents or guardians who wish to withdraw their children or wards from the University should write to the President stating their wishes. No honorable discharge will be given to a student under age who is unable to produce the written application of his parent or guardian for his withdrawal, nor will an honorable discharge be given to a student under censure of any kind, whether for neglect of duty or other cause, even though he may have the consent of his parent or guardian for his withdrawal from the University.

### SALE OF ARDENT SPIRITS PROHIBITED.

By an act of the General Assembly of the State of Arkansas, approved March 6, 1875, it is unlawful for any person to sell or give any vinous or ardent spirits within 3 miles of the Arkansas Industrial University, unless it be prescribed by a regular practicing physician for medicinal purposes.

## UNIVERSITY ORGANIZATIONS.

### LITERARY SOCIETIES.

Material changes have recently been made in the organization of the literary societies, and their meetings, which are held weekly, afford enlarged opportunities for improvement in declamation, composition, debate, etc. Renewed interest in this valuable means of culture is shown by a number of students.

### PRIZES IN THE MATHETIAN SOCIETY.

Dr. A. S. Gregg, of the class of 1878, and Professor G. W. Droke, of the class of 1880, both members of the Mathetian Society, have generously offered prizes to be competed for by the members of that society; the former for the best oration, including both composition and delivery; the latter for the best declamation. These prizes are awarded during the commencement exercises.

### SCIENCE CLUB.

The Science Club was organized early in the fall of 1896. Its purpose is to stimulate interest in all branches of science, encourage the spirit of scientific investigation, and keep its members in touch with the progress of science in general. While membership is open to all, students taking the science courses are urged to take an active interest in the meetings of this club. The meetings are held on the first and third Saturday evenings of each month.

### THE SOCIOLOGY CLUB.

The Sociology Club is an organization having for its aim the investigation and discussion of the social relations and social problems of our civilization. Membership is free, and includes, besides students and professors, many citizens of Fayetteville. This club meets biweekly on Friday evenings.

## THE ARKANSAS UNIVERSITY GEOLOGICAL AND BIOLOGICAL SURVEY.

For the promotion of interest in the natural sciences and a systematic investigation of the many interesting questions of natural history within and adjoining the State, it is proposed to organize the Arkansas University Geological and Biological Survey. A party will be organized for field work during the summer vacation under the direction of the professors in charge of Geology and Biology. Any student whose attainments are such as to permit him to take the work to advantage may be admitted to the party. In each case credit will be given in the University course according to the time spent and the character of the work done. Science teachers and others interested in science throughout the State are cordially invited to avail themselves of this opportunity of doing a pleasant and profitable summer's work.

### UNIVERSITY MAGAZINE.

The "Ozark" is a monthly periodical published by a stock company and edited by a committee of students. It is sent free to all the accredited schools and to such other schools in the State as may desire it.

### LECTURE COURSE.

The following lectures and entertainments were given during the year, under the auspices of the Lecture Association of the University:

George R. Wendling "Unseen Realities," October 18.

New York Male Quartette, November 16.

Frank Beard—"Chalk Talk," January 31.

F. R. Underhill—"The Rivals," February 8.

Alexander Black—"Miss Jerry," March 9.

Boston Ideal Club, April 5.

Anna Delony Martin "The Prisoner of Zenda," May 20.

### RELIGIOUS EXERCISES.

Religious exercises are held regularly in the University Chapel at the beginning of each daily session. Students are required to attend.

The churches of Fayetteville cordially welcome the students to their Sunday schools and various meetings for prayer and religious instruction. The denominations represented in the city are Baptist, Presbyterian, Cumberland Presbyterian, Methodist Episcopal, Methodist Episcopal South, Protestant Episcopal, Christian, and Roman Catholic. Many of the students are actively engaged in the work of the different church societies and guilds. The Young Men's Christian Association has commodious quarters in the city, and a commendable interest is shown. A Bible class has held meetings Sunday afternoon, and has been well attended.

## ATHLETIC ASSOCIATION.

The purpose of this organization is to encourage the development of the physical man.

The Association as originally formed consisted of the A. I. U. Athletic Club, the A. I. U. Tennis Club, the A. I. U. Baseball Club, and the A. I. U. Football Club; and it is further provided that if any

other club, organized by the students of the University for the practice of any sport, game, or exercise not already represented by one of the members of the Association, shall make a written application for membership in the Association, and the said application shall be approved by the governing body of the Association, the petitioning club shall become a member of the Association with all the rights and privileges pertaining to such membership.

### MILITARY DEPARTMENT.

The head of this department is an officer of the United States Army detailed by the War Department for duty at the University.

All male collegiate students are required to take the Theoretical Course, and all male students over 15 years of age not physically disabled are required to take the Practical Course in Military Science, the latter including infantry drill, target practice, camping, guard duty, and various other exercises, the course covering the entire period of the student's stay at the University.

The act of Congress donating public lands for educational purposes requires that institutions which are the beneficiaries of such donations include Military Science and Tactics in their courses of instruction.

The system of practical instruction closely follows that used in the United States Army. It contains a course of gymnastic exercises for the development and improvement of the arms, chest, legs, hands, and feet. Besides being excellent physical training this instruction has many advantages mentally. The necessity of being alert, listening for each word of command, and acting promptly on it, quickens the wit and cultivates the habit of fixing the attention and concentrating the thoughts. In addition to all this, it inculcates in the student a respect for authority and discipline which is equaled by no other system.

The cadets are organized into two battalions composed of field staff, band, and six companies. The officers and noncommissioned officers are selected from those students who are most proficient in their drill and military studies, and most exemplary in their deportment, the majors, captains, and lieutenants being taken, usually, from the senior and junior classes, and sergeants and corporals from the Sophomore and Freshman classes. An office in one of the battalions is one of merit and distinction, and any unbecoming conduct subjects the appointee to reduction to the ranks.

The cadet band of some twenty-five pieces constitutes an interesting feature of the military organization. It receives the best instruction obtainable, practices three hours per week, and takes part in all military ceremonies.

A competitive drill is held annually at the close of the school year, when prizes are awarded for proficiency in this department. The result of the last competition held in June, 1896, was as follows:

### COMPETITION AMONG THE COMPANIES.

To Company "F", Captain M. I. Bell, commanding, was awarded the National Color for the following year.

### CAPTAINS' COMPETITION.

To Captain (now Major) M. L. Bell was awarded the Sword.

#### INDIVIDUAL COMPETITION.

To Corporal Troy Pace was awarded the Gold Medal.

### ARMY APPOINTMENTS.

The three students of the Senior class having the highest grade of merit in this department are reported to the Secretary of War, and their names are recorded in the Adjutant-General's Office and published in the Army Register for that year. The President of the United States, in appointing officers from civil life, gives preference to those whose names are so recorded. The three graduates of the class of 1807 having the highest military merit were: Cadet Major Earle K. Braly, Cadet Captain James L. Moore, Cadet Captain William E. Pruett. Cadet officers, on graduation, are brevetted in the State Guard with the rank held by them in the Cadet Battalions at the date of their graduation, and recommendations of the Commandant of Cadets as to special military qualifications of graduates of the military course are filed in the office of the Adjutant-General of the State and considered in appointing commissioned officers of the State Guard

## UNIVERSITY OF ARKANSAS

## LIBERARY ganizations.

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A neat uniform of gray cloth, with brass buttons and black trimmings, is required to be worn by all cadets at drill. The uniform, complete, costs about \$15, and with ordinary care will last an entire year.

DEGANIZATION OF THE CORPS OF CADETS FOR THE YEAR 1897-98.

†Elias Chandler, First Lieutenant 16th U. S. Infantry, Commandant of Cadets.

‡W. P. Stone, First Lieutenant 6th U. S. Artillery, Commandant of Cadets.

### COMMISSIONED AND NONCOMMISSIONED STAFF.

Callet	First Lieutenant and Adjutant.	James Mitchell, Jr.
t i let l	First Lieutenant and Quartermaster	*John H. Keel.
Cilet I	First Lieuten int an I Quartermaster	\$Willis E. Ayres.
Cadet S	Sergeant Major	Daniel W. Taylor.
Cadet	Quartermaster Seigeant	William R. McCain.

#### BAND.

Cadet First Lieutenant, Commanding Band Robert N. Cummings.
Cadet First Lieutenant, Leader of Band
Ca let Second Lieutenant, Assistant Lea ler of Band Hugh W. Gates.
Cadet Principal Musician Fred A. Tolle.
Cadet Principal MusicianT. T. Dickinson.
Cadet Principal Musician
Cadet Drum MajorGeorge W. Shuler.
Cadet Sergeant of the Band A. J. Vaughan.

### FIRST BATTALION.

Calet Main, C	ommanding th	e Battalion	George	Nicholls.
	COMPANY "F	' (COLOR COM	IPANY).	

Cadet Captain	A. V. Smith.
Cadet First Lieutenant	W. H. Rattenbury.
Cadet Second Lieutenant	W. L. Goodwin.
Cadet First Sergeant	T. C. Trimble.

<sup>†</sup>Term expired by law February 28, 1808.

Term commenced March 1, 1898.

<sup>\*</sup>Honorably discharged.

<sup>§</sup>Appointed February 21, 1808.

Cadet Sergeant	,
Cadet Sergeant	
Cadet Sergeant	
Cadet Sergeant	
Cadet Corporal	
Cadet Corporal	
Cadet Corporal	W. E. Taylor.
Cadet Corporal	L. L. Newman.
COMPANY 46E. "	
Cadet Captain	G. H. Askew.
Cadet First Lieutenant	
Cadet Second Lieutenant	
Cadet First Sergeant	W. V. Boatwright.
Cadet Sergeant	0
Çadet Sergeant	
Cadet Sergeant	
Cadet Sergeant	
Cadet Corporal	
Cadet Corporal	
Cadet Corporal	•
Cadet Corporal	
^	
COMPANY "A."	
Cadet Captain	
Cadet First Lieutenant	
Cadet Second Lieutenant	
Cadet First Sergeant	
Cadet Sergeant	
Cadet Sergeant	,
Cadet Sergeant	
Cadet Sergeant	
Cadet Corporal	O. E. Jones.
SECOND BATTALION,	
Cadet Major, Commanding the Battalion	M. L. Bell
Charles and a second se	

## COMPANY "B."

Cadet Captain	B. E. Turner.  J. H. Blair.  G. F. Towler.  C. H. Orto.  J. R. Smith.  H. L. Ross.  M. D. Clark.  C. C. Curry.  J. M. Clayton.  F. I. Brown.
COMPANY 64C.77	
Cadet Captain	
Cadet Captain	
Cadet First Lieutenant	
Cadet Second Lieutenant	
Cadet First Sergeant	
Cadet Sergeant	
Cadet Sergeant	
Cadet Sergeant	
Cadet Sergeant	
Cadet Corporal	F. A. Howard.
COMPANY "D."	
Cadet Captain	*H. Y. Fishback.
Cadet Captain	
Cadet First Lieutenant	*
Cadet Second Lieutenant	
Cadet First Sergeant	
Cadet Sergeant	
Cadet Sergeant	
8	

<sup>†</sup>Honorably discharged, December 16, 1897.

<sup>\*</sup>Died, January 3, 1898. Appointed, February 21.

Cadet	Sergeant	B. L. Moore.
	Sergeant	
	Corporal	
	Corporal	
	Corporal W	
	Corporal	

### THE AGRICULTURAL EXPERIMENT STATION.

The National Government established the Experiment Station as a department of the University in 1887, and maintains it to investigate agricultural problems for the aid of the farmers of the State.

The work of the Experiment Station is divided into the special lines of Agriculture, Horticulture, Chemistry, and animal and plant diseases. Specialists are employed in each line, and experiments are made both in the field and laboratory in the improvement of soils, the rotation of crops, diseases of plants and domestic animals, in fertilizers, the value of stock foods, dairying, and other matters. Students interested in agricultural subjects are given opportunity to observe the experiments and to acquaint themselves with the work of the Station in its various departments; the bulletins are also available for their use. The experiments and their results are published in bulletins, which are sent free to farmers, stock raisers, and fruit growers of the State, and to others interested in agriculture.

Those who desire the Station bulletins should apply for them to the Director of the Station, Fayetteville, Ark. One application is sufficient to obtain all future bulletins, if desired.

## DEGREES.

The following degrees are conferred by the University:

## For undergraduate work:

Bachelor of Arts (B. A.).
Bachelor of Science (B. S.).
Bachelor of Civil Engineering (B. C. E.).
Bachelor of Mechanical Engineering (B. M. E.).
Bachelor of Electrical Engineering (B. E. E.).
Bachelor of Scientific Agriculture (B. S. A.).

## For graduate work:

Master of Arts (M. A.).

Master of Science (M. S.).

Doctor of Philosophy (Ph. D.).

Graduates in engineering may receive the advanced degrees of C. E., M. E., or E. E., according to the course pursued.

# REQUIREMENTS FOR THE DEGREES OF BACHELOR OF ARTS AND BACHELOR OF SCIENCE.

The number of hours required for graduation in all courses leading to the degrees of B. A. and B. S. is sixty, exclusive of military science and tactics. Of these in the B. A. courses not less than seventeer nor more than twenty-one must be elective; in the B. S. courses not less than seventeen nor more than twenty-four. The following general requirements are made:

## For the Degree of B. A.:

	Latin	********		(	6 hours.
	Modern 1	Languages	or Gre	ek6	6 hours.
	English				hours.
	Mathemat	tics		5	hours.
ø	Natural S	cience.			hours.
		Science			

## For the Degree of B. S.:

French3	hours.
German3	hours.
French, or German, or Latin 3	hours.
English6	hours.
Mathematics	hours.

<sup>\*</sup>The B. A. course with Economics and Sociology may require 6 hours of Natural Science, instead of 3 each of Natural and Physical Science.



## SCHEDULE OF COURSES OF STUDY.

## A. FOR THE DEGREE OF BACHELOR OF ARTS.

#### I. COURSE WITH ANCIENT LANGUAGES.

Freshman.	Sophomore.
Latin I     3       Greek I     4       Mathematics I     2       Mathematics 2     3       English I     3	Latin 2       3         Greek 2       4         English 2       3         Elective       5
Junior.	Senior.
Latin 3       2         Latin 4       2         Greek 3       2         Greek 4       2         Elective       7	Latin 5 and 6 or 3  Greek 5  English 6
	Natural Science, one in Physical
Science.	
II. COURSE WITH M	ODERN LANGUAGES.
ii. Course with a Freshman.	IODERN LANGUAGES. Sophomore.
Freshman.	
Freshman.         Latin I	Sophomore.  Latin 2
Freeshman.         Latin I	Sophomore.         Latin 2

Required: One course in Natural Science, one in Physica Science.

Note: The figures immediately following each subject refer to the courses of study as described on pages (3-76); those on the right to the number of hours per week.

### III. COURSE WITH MATHEMATICS.

Freshman.	Sophomore.
Latin I       3         French I or Greek I       3         Mathematics I       2         Mathematics 2       3         English       3	Mathematics 3 and 4
Junior.	Senior.
Mathematics 5, 6 and 7       5         German 1 or French 1       3         Elective       7	Mathematics 8 and 9 3 Elective
Required: One course in	Natural Science, one in Physical
Science.	
IV. COURSE W	VITH HISTORY.
Freshman.	Sophomore.
Latin I     3       Mathematics I     2       Mathematics 2     3       English I     3       History 3     I       Elective     3	English 2 3 History 2 3 History I 2 Latin 2 3 Elective 4
Junior.	Senior.
English 4 2 History 4	History 6
Required: Two courses in	Modern Languages or Greek, one
course in Natural Science, one in	Physical Science.
v. course wi	TH ECONOMICS
Freshman.  Latin 1	Sophomore.  Modern Language

Junior.	Senior.
Economics 5 and 6	2 Economics 7 and 8 3 2 Sociology 9 and 10 2 3 Elective
Required: Latin 2, Math	ematics 2.
VI. COURSE	WITH CHEMISIRY.
Freshman.	Sophomore.
Physics I	3 Chemistry 3 (a) 1st term
Junior.	Senior.
Modern Language	
Required Mathematics (	, one course in Natural Science.
VII. COURSI	WITH ZOÖLOGY.
	WITH ZOOLOGY.
Freshman.	Sophomore.
Freshman.  Latin I English I Mathematics I and 2 Biology I Elective	Sophomore.         3       Latin 2       3         3       English 2       3         5       Chemistry I       3         3       Zoölogy I       3
Latin I English I Mathematics I and 2 Biology I	Sophomore.         3       Latin 2       3         3       English 2       3         5       Chemistry I       3         3       Zoölogy I       3
Latin I English I Mathematics I and 2 Biology I Elective  Junior.  Modern Language Zoology 3 Zoology 2 and 4 or )	Sophomore.         3       Latin 2       3         3       English 2       3         5       Chemistry I       3         3       Zoölogy I       3         1       Elective       3
Latin I English I Mathematics I and 2 Biology I Elective  Funior.  Modern Language Zoology 3 Zoology 2 and 4 or Entomology I Elective	Sophomore.   3
Latin I English I Mathematics I and 2 Biology I Elective  Funior.  Modern Language Zoology 3 Zoology 2 and 4 or Entomology I Elective	Sophomore.   3

21 Kansas Inaust	riai Oniversity.
Junior.	Senior.
Modern Language	Modern Language         3           Geology 5         2           Geology 6         3           Elective         7
B. FOR THE DEGREE OF	BACHELOR OF SCIENCE.
I. COURSE WIT	TH MATHEMATICS.
Freshman.	Sophomore.
Mathematics I and 2	Mathematics 3 and 4       5         English 2       3         French or German       3         Elective       4
Junior.	Senior.
Mathematics 5, 6 and 7 5 German or French 3 Logic and Astronomy 3 Elective 4	Mathematics 8 and 9
Science.	Vatural Science, one in Physical
Freshman,	Sophomort.
Modern Language         3           Mathematics I         2           English I         3           Economics I         2           History 2         3           Elective         2	Modern Language         3           English 2         3           Economics 2, 3 and 4         3           Geology 2         3           Elective         3
Junior.	Senior.
Economics 5 and 6       2         History 6       2         Biology I       3         Elective       8	Economics 7 and 8 3 Sociology 9 and 10 2 Elective 10
Required: Mathematics 2, or in Latin.	one course in Modern Languages

## III. COURSE WITH CHEMISTRY.

Freshman,	Sophomore.
Mathematics I       2         Mathematics 2       3         English I       3         Physics I       3         Chemistry I       3         Elective       1	Modern Language       3         English 2       3         Chemistry 3 (a) 1st term Chemistry 2 2d term       2         Chemistry 3 (b)       3         Elective       4
Junior.	Senior.
Modern Language         3           Chemistry 5         4           Flective         8	Modern Language         3           Chemistry 7         3           Chemistry 6 and 9         4           Elective         5
IV. COURSE V	VITH ZOÖLOGY.
Freshman.	Sophomore.
Latin or Modern Language       3         English I       3         Mathematics I and 2       5         Biology I       3         Elective       I	Modern Language       3         English 2       3         Chemistry I       3         Zoölogy I       3         Elective       3
Junior.	Senior.
Modern Language         3           Zoölogy 3         1           Zoölogy 2 and 4 or Entomology 1         5           Flective         0	Zoölogy 5 and 6 or Entomology 2 5 Elective
v. course w	TITH GEOLOGY.
Freshman.	Sophomore.
Modern Language or Latin 1.         3           English 1.         3           Chemistry 1.         3           Geology 1.         3           Flective         3	Modern Language       3         English 2       3         Mathematics 2       3         Geology 2       3         Elective       3
Junior.	Sentor.
Modern Language         3           Mathematics I         2           Geology 3         1           Geology 4         3           Elective         6	Geology 5

## VI. COURSE WITH AGRICULTURE.

Freshman.	Sophomore.
FIRST SEC. TERM. TERM	
Mathematics 2       3       3         Modern Language       3       3         English 2       3       3         Chemistry I       3       3         Horticulture I       3       3         Agriculture I       3       3	Modern         Language         or           Latin I         3         3           English I         3         3           Chemistry, Agric'l         3         3           Horticulture 2         3           Agriculture 2         3           Elective         3         3
Junior.	Senior.
Modern Language       3       3         Mathematics I       2       2         Botany I       3       3         Agriculture 3       2         Anatomy       2       2         Hygiene       1         Elective       3       4	Bacteriology 2 Agriculture 4 2 2 Elective 11 13
VII. COURSE WI	TH HORTICULTURE.
Freshman.	Sophomore.
Mathematics I       2         Mathematics 2       3         Chemistry I       3         Agriculture I*       3         Horticulture I§       3         English I       3         Elective       1	English 2       3         Botany 1       3         Physics 1       3         Horticulture 2§       3
Junior.	Senior.
Modern Language         3           Economic Eutomology         3           Bacteriology*         3           Horticulture 3\$         3           Elective         6	Horticulture 4

<sup>9</sup> First term.

Second term.

## C. COURSES IN ENGINEERING.

## 1. MECHANICAL ENGINEERING, B. M. E.

Mathematics I. Chemistry I. Physics I. English I. M. E. 2. M E. I a, b	Sophomore.  Mathematics 3, 4	3
M. E. 4, 1st term M. E. 11, 2d term M. E. 12, 13, and E. E. 7 C. E. 9, 1st term M. E. 7 M. E. 10 M. E. 10 M. E. 1 c, d	M. E. 9, 5, 6, 1st term	
	NEERING, B. C. E.	
Freshman.  Mathematics 2  Mathematics 1  Chemistry I  Physics I  English I  M. E. 2c  C. E. 8	Sophomore.  3 Mathematics 3, 4	
Mathematics 2 Mathematics I Chemistry I Physics I English I M. E. 2c C. E. 8	Sophomore.	

## III. ELECTRICAL ENGINEERING, B. E. E.

Freshman.	Sophomore.
Mathematics 1, 2       5         English 1       3         Physics 1       3         Chemistry 1       3         M E. 2c       2         M. E. 1c and d       2	Mathematics 3, 4 5 Physics 2
Junior.	Senior.
Mathematics 5       3         Mathematics 9 (Optional)       3         E. E. 7       5         E. E. 8       2         E. E. 5       2         E. E. 14, Ist term       2         M. E. 4, Ist term       2         M. E. 11, 2d term       3         M E. 12, 13, 2d term       5	Chemistry 12, 1st term

For short course in Electrical Engineering, see page 101.

# D. COURSES FOR THE DEGREE OF BACHELOR OF SCIENTIFIC AGRICULTURE.

### I. AGRICULTURE.

First Year.		Second Year	۲,	
FIRST TERM.			FIRST TERM.	SEC. TERM.
Algebra, 2d year 3		Algebra 1		2
Geometry, 2d year 2		Geometry 2		3
General History 3		General Chemistry I		3
Rhetoric 4	4	English I		3
Freehand Drawing 2		Agriculture I		
Botany	2	Horticulture I		3
Bookkeeping		Shop Work		4.4
Commercial Law	I	Elective	3	3
Elective 2	2			

Third Year.	Fourth Year.
Surveying       3       3         Biology       3       3         Advanced Physiology       3         Agriculture       3         Chemistry, Agric'l       3       3         Botany       3       3         Elective       6	Anatomy and Hygiene 2 3 Po itical Economy 1 2 2 Geology 1
II. HORT	TICULTURE.
First Year.	Second Year.
Algebra, 2d year       3         Geometry, 2d year       2         General History, 2d year       3         Rhetoric, 2d year       4         Freehand Drawing*       2         Botany\$.       2         Bookkeeping*       1         Commercial Law\$       1	Algebra I
French, German, or Latin       3         Physics t°       3         Advanced Physiology*       3         Horticulture 2§       3         Agricultural Chemistry       3         Botany I       3	French, German, or Latin       3         Political Economy I       2         Geology I       3         Economic Entomology       3         Bacteriology*       3         Horticulture 3\$       3

## E. GRADUATE DEGREES.

## I. REQUIREMENTS FOR THE MASTER'S DEGREES.

Applicants for the degree of M. A. or M. S. must have previously taken the Degree of B. A. or B. S. at this institution or at one having equal requirements. In addition they must take at the University, for a full scholastic year, not less than fifteen hours of recitations and lectures, as determined by the Faculty, and submit a satisfactory thesis.

AIU'-5

<sup>First half year.
Second half year.
By special arrangement students may take Biology.</sup> 

Bachelors of Arts or of Science of this University may obtain the master's degree without actual residence, but must complete the work mentioned above and pass satisfactory examinations upon it.

# II. REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY (PH. D.)

- 1. This degree will be conferred for distinguished attainments, as shown by examination and thesis, in any one of the six following subjects: Latin, Greek, German, French, English, or History, together with subordinate attainments in two others of the six; or for distinguished attainments in one principal and two subordinates, of the following sciences: Chemistry, Physics, Geology, Biology, Mathematics, Mechanics, Civil Engineering, or Electricity.
- 2. This degree shall be open to persons who have received the Degree of B. A. or B. S. at this institution, or at one having equal requirements. Ordinarily it will take three full years' study to complete the work required for this degree, and the last year or a longer time must be spent in resident study at this University.
- 3. A thesis of 5,000 words or more showing original research shall be required of every applicant, the subject of which shall be announced and passed upon by a committee of the Faculty at least one year before the time set for the final examination, and the thesis itself must be presented to the committee two months before admission to this examination.

Twenty-five copies of the approved and printed thesis shall be placed in the University library.

4. All applicants for this degree must, by the end of the first year of the course, be sufficiently conversant with French and German to read with ease any scientific work written in these languages.

# III. REQUIREMENTS FOR THE DEGREES OF C. E., M. E., OR E. E.

These courses of study are intended to give additional preparation to those students who have finished an undergraduate course in Engineering, for some special line of work to which their previous study has led. The student will have all reasonable liberty in selecting such specialties and will be limited only by certain general requirements. He will be required at the beginning of the year to make up the course which he proposes to follow and to present it to the Faculty, approved by the instructors concerned. If accepted, it will be subject to change only by the Faculty. In general, it is expected that these courses shall comprise one principal subject based on the course already pursued and two secondary subjects, one or both of which should be closely related to the principal. The graduate course should amount to not less than fifteen recitation hours per week as counted in undergraduate work.

The subject of a thesis for any of the above degrees must be submitted to the Faculty for approval before the middle of the second term.

These degrees will also be given to graduates in Civil, Mechanical, and Electrical Engineering who have been in successful practice of their profession for three years and who have submitted a satisfactory thesis on a subject approved by the Faculty.

Charges.—Graduate students pay \$10 for matriculation and registration, \$10 tuition (nonresidents \$5) at the beginning of each session, and \$10 in advance for the final examination. Students who fail to comply with any of these requirements, or who do not each year complete the equivalent of two terms' work in one subject, will be dropped from the rolls. Should such students desire to resume their studies, they must pay for matriculation and registration, as if beginning for the first time. The diploma fee is \$5 in advance in each case.

Graduates attending only undergraduate classes pay the same fee as undergraduates.

Nonresident students have such assistance and instruction in their studies as can be conveniently given by correspondence.

### HONORS.

Students who have attained grade "E" in work aggregating fifty hours per week (counted on the basis of a four years' course), are granted degrees "with special distinction."

Students who have attained grade "E" in work aggregating thirty-two hours per week, or grade "E" or "G" in work aggregating fifty hours per week, are granted degrees "with distinction."

## DESCRIPTION OF COURSES.

## ANCIENT LANGUAGES.

J. C. FUTRALL, Professor. E. F. SHANNON, Associate Professor.

In this department the following courses are offered:

	LATIN.
Ι.	Sallust, Cicero and Virgil3  An accurate knowledge of the Latin forms is insisted upon; exercises in prose composition taken from Bennett's Latin Composition; Roman History.  Associate Professor Shannon.
2.	Livy and Cicero
	Systematic study of the grammar; exercises in prose composition, based chiefly upon the authors read in class; sight reading; Roman literature.  Professor Futrall.
3.	Cicero, Livy and Tacitus 2
	Large amounts of each author read in class; parallel reading assigned; study of the grammar continued; Roman literature.  Professor Futrall.
	Note.—The figure on the left indicates the number of the course, that on the right the number of hours per week,
4.	Sight Reading and Prose Composition 2
	The exercises in prose composition will be based chiefly on the authors read in Course 3.
	Professor Futrall.

70	Arkansas Industrial University.
5.	Horace, Juvenal, Catullus, Terence and Plautus 2
	As much of each author as possible will be read in class and a large amount of parallel reading will be assigned.  Professor Futrall.
6.	Sight Reading and Prose Composition 1
	This course will include sight reading from the authors read in Course 5, and the translation of connected passages of idiomatic English into idiomatic Latin.  Professor Futrall.
	Text-books: Bennett's and Gildersleeve's Grammars; Lid-dell's History of Rome; Wilkin's Primer o. Roman Literature; Crutwell's Roman Literature. Any approved edition of the Latin authors may be used, except when certain editions are prescribed.
	GREEK.
1.	Elementary Course 4
	White's Beginner's Greek Book, with selections for reading. A thorough mastery of the forms and constructions given in this book is required.
	Associate Professor Shannon.
2.	Xenophon and Lysias 4
	This course is intended to familiarize the student with all the ordinary Attic forms and constructions; frequent exercises in oral and written translation of English into Greek, based upon the text read, are given, and some practice in sight reading; Goodwin's Grammar.  **Associate Professor Shannon.**
3.	Homer, Herodotus and Thucydides 2
	Greek literature; sight reading.  Associate Professor Shannon.
4.	Xenophon and Plato2

Systematic study of the grammar; prose composition. Professor Futrall.

## 5. Plato. Sophocles, Aristophanes and Demosthenes 3 Professor Futrall.

Text books: Goo lwin's Revised Greek Grammar; Goodwin's Greek Moods and Tenses; Collar and Daniell's Prose Composition, based on Xenophon's Anabasis: Higley's Exercises in Greek Composition. Any approved edition of the Greek authors may be used, except when certain editions are prescribed.

## ENGLISH AND MODERN LANGUAGES.

R. H. WILLIS, Professor.

IDA PACE, Associate Professor.

CLARA EARLE, Instructor.

### ENGLISH.

## 1. English Language and Literature ...... 3

- (a) Meikleiohn's English Language; eight essays (chiefly narrative and descriptive) criticised and corrected by the instructor and copied by the student; thorough drill in English metres. For reference: Baskerville and Sewell's Grammar, Lounsbury's History of the English Language. Twice a week.
- Merklejohn's History of English Literature, with parallel readings from thirty-tive leading authors, ranging from Mandeville to Ruskin, and reports on same in class. For reference: Paneoast's English Literature, Shaw, and others. Once a nuck

## Miss Pace and Miss Earle.

## 2. Prose Style and American Literature . ... 3

criticism. For 1898-99 the selections are from Irving, Russin. Carlyle, Burke. Goldsmith, Swift, Addison. Bacon: three essays. Text-books: Girnett's English Prose and other texts, with extensive critical notes and questions prepared by the instructor. For topical study: Genung's Rhetoric. For reference: Minto, Pancoast, Shaw, and others, Twice a week.

(b) Watkin's American Literature, with extensive parallel readings from leading American authors, and class reports For reference: Hawthorne and Lemon, Manly, Pancoast, Pattee. Once a week.

Miss Pace.

[In 1899-1900 the prose selections for (a) will be from Hawthorne, Thackeray, Macaulay, DeQuincey, Scott, Johnson, Steele, Milton. This part of Course 2 may be taken for two consecutive years.]

FIRST TERM—A critical study of representative writers and of their masterpieces, with parallel readings, reports in class, and essays. Text-books: Saintsbury's Literature of the Nineteenth Century, and topical studies from Morley, Stedman, Taine, Whipple, and others; critical editions of Hood, Tennyson, the Brownings, Ruskin, and of other prominent writers. The study of prose writers in this class is a continuation of the course in nineteenth century prose given in English 2.

Miss Pace.

[In 1899-1900, the Classic School of Poets. Course 3 (a) may be taken for two consecutive years.]

SECOND TERM—Lives of the leading writers and critical study of their masterpieces, with parallel readings, reports in class and essays. Text-books: Pattee's American Literature and topical studies from Manly, Pancoast, Stedman, Richardson, from the American Men of Letters Series, and from other works; critical editions of Irving, Bryant, Poe, Longfellow, Emerson, Lanier, and of other leading writers.

Miss Pace.

[In 1899-1900 Poets of the Romantic Movement Course 3 (b) may be taken for two consecutive years.]

4. Middle English and Early Modern English . 2

Literary history of period from Chaucer to Milton; reading of representative authors with historical, philological, and literary criticism: three essays. Morris's Chaucer, Kitchen's Spenser, Cook's or Sprague's Milton, Sprague's plays of Shakespeare and the Arden edition, parallel readings from these authors. For reference: Bucknell, Coleridge, Dowden, Gervinus, Hazlitt, Hudson, Pollard, Saintsbury, Ulrici, and others.

Professor Willis.

## 5. Anglo-Saxon and Middle English .... 3

Readings from the Anglo-Saxon Gospels and Chronicles; selections from Alfred, Aelfric, Cledmon, and later writers Bright's Anglo Saxon Grammar and Reader (130 pages translated; Morris's Specimens of Early English, Part I; Ten Brink's Old English Laterature (selections). For reference: Cook's First Book in Old English, Cook's Sievers's Grammar of Old English, March's Anglo-Saxon Grammar (syntax), Skeat's Etymological Dictionary, Brook's Early English Literature.

Professor Willis.

### 

Champney's English Language with parallel readings and lectures. For reference and topical study: Skeat's Principles of English Etymology, Sweet's Grammar (historical part), Earle, Emerson, Henry, Morris, Peile, and others.

Professor Willis.

#### GERMAN.

## 1. Modern German, Elementary ...... 3

Thomas's Grammar with composition; Harris's Reader + 180 pages); three lyric gems memorized.

Professor Willis.

Students are advised not to elect this course unless they intend to take another year of German.

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Riehl's Vierzehn Nothelfer and Trost um Trost; Heyse's Midchen von Treppi and Marion; Tregtag's Aus dem Staat Friedrich's des Grossen; Schiller's Wallensteen's Fod; Bernhardt's Deutsche Litteraturgeschichte with topics from Scherer's

74	Arkansas Industrial University.
	German Literature: grammar and original composition. For reference: Whitney's Grammar; Jagemann's Syntax. Dictionaries: Fluegel, Thieme-Preusser, Classic, Heath, or Adler (Quarto).  **Professor Willis**
3.	Lessing and Goethe 2
	Lessing's Emilia Galotti; Goethe's Egmont and prose selec- tions; topics from Scherer; Lewes's Life of Goethe with par- allel reading of Düntzer. For reference: Bramit's Grammar; Behaghel's Historical Grammar.  Professor Willis.
4.	German at Sight and Conversation 2
	Andersen's Mürchen; Benedix's Günstige Verzeichen, and Der Process; Zechmeister's Einer Muss Heiraten; Ger- stäcker's Irrfahrten; Worman's First and Second Books. Professor Willis.
5.	Scientific German 1
	Dipp sld's Scientific German Reader and other selections from German scientists.  Miss Pace.  Notr.—2, 3, and 4 have different readings in 1899, 1900, and each may be taken for two consecutive years.
	FRENCH.
Ι.	Modern French, Elementary3
	Bevier's Grammar with composition; Rollin's Reader, containing simple prose tales, some extended selections from recent French authors, and a few lyrics from Victor Hugo, Béranger, Gautier, and other poets; De Maistre's La Jeune Sibérienne.  Miss Farle.
2.	Ninetecnth Century Literature 2
۵,	Warren's Selections from Victor Hugo: Erckmann-Chatrian's

Histoire d'un Paysan: Beaumarchais's Barbier de Seville: Balzac's Curé de Tours; Duval's Literature Française

	(eighteenth and nineteenth centuries): grammar and com- position continued. For reference in 2 and 3: Whitney's Grammar: Harrison's French Syntax: Saintsbury's History of French Literature, and other larger works. Dictionaries: Gase's, Spier's, and Surenne's Quarto, Heath's, The Classic. Miss Earle.
3.	The French Classic Drama 3
	Critical study of representative authors; Corneille's Polyeucte; Racine's Esther; Moliere's Les Femmes Savantes and Le Medécin Malgré Lui; grammar and composition continued; original composition; Duval's Literature to 1700.  Miss Earle.
4.	French at Sight and Conversation 2
	Jules Verne's Tour du Monde; Labiche et Martin's Poudre aux Yeux; Fontaine's Lecture et Conversation.
	Miss Pace.
5.	Scientific French 1
	Herdler's Scientific French Reader and other selections from French scientists.  Miss Earle.
	Note-2, 3, and 4 have different readings in 1899-1900, and each may be taken for two consecutive years.
	SPANISH.
I.	Modern Spanish, Elementary 3
	Edgren's Spanish Grammar with composition; Worman's First Spanish Book; Matzke's Spanish Reader, containing extracts from the best modern authors; Caballero's La Familia
	de Alvareda.  Miss Earle.
	Ordinarily this class will not be formed for less than five students.
2.	The Spanish Classic Writers
	Selections from Don Quixote; Lope's La Discreta Enamorada; Calderon's La Vida es Sueño, and El Alcalde de

Zalamea; Conant's Spanish Literature; grammar and original composition. For reference: Knapp's Grammar; Sismondi's Literature; Clarke's Spanish Literature; Valesquez's Quarto Dictionary.

Professor Willis.

### 3. Spanish at Sight and Conversation ..... 2

Valera's El Pajaro Verde; Larra's Partir á Tiempo; Moreto's El Desden con El Desden; Herrero's La Independencia; Worman's Second Book.

Professor Willis.

#### ITALIAN.

### 1. Elementary Course .... 3

Grandgent's Grammar with composition; Bowen's Reader eselections from standard modern authors); Sonzogno's Letteratura Italiana; De Amicis's Alberto.

Will not be taught for less than five students.

### 

Nota's La Fiera; Ongaro's Rosa del' Alpi; De Amicis's Camilla; Tasso's Gerusalemme Liberata; grammar and composition continued. For reference: Cuore's Grammar; Sismondi's Literature. Dictionary: Milhouse or Baretti.

### MATHEMATICS, ASTRONOMY, AND LOGIC.

/ GEO. W. DROKE, Professor.
B. J. DUNN, Associate Professor.

It is the aim of this Department to give a thorough training in those subjects of mathematics which are usually required for the Bachelor's Degree, and to afford ample preparation to those of its graduates who may desire to pursue advanced courses in this or any other institution. It is not the intention to emphasize specialization to such an extent as to make the course essentially narrow. The student who proposes to enter any of the so-called learned professions will find that the requirements in mathematics, while quite sufficient for superior discipline, are not so rigid as to prevent a symmetrical development of his mental faculties.

The elective courses are intended to afford additional opportunities to those who may desire to give special attention to mathematics and its various applications.

The following courses are offered:

#### MATHEMATICS.

Ι.	Algebra 2
	Beginning with simultaneous quadratic equations, through
	ratio, proportion and variation, progressions, indeterminate
	coefficients, binomial theorem, theory of logarithms, choice,
	and theory of numbers. Text-book: Wentworth's Higher
	Algebra.
	Professor Droke,
	Associate Professor Dunn.

A large proportion of the time is devoted to geometrical analysis, with exercises for original solution. Each student will be required to keep a notebook, in which his original solutions must be neatly copied. Text-books: Phillips and Fisher's Geometry, Bowser's Trigonometry.

Professor Droke.
Associate Professor Dunn.

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3 -	Plane and Spherical Trigonometry, Determinants, and Analytic Geometry
	FIRST TERM - Text books: Bowser's Trigonometry, Peck's Determinants, Puckle's Conic Sections.  Associate Professor Dunn.
4.	Analytic Goemetry
	SECOND TERM—Text-book: Puckle's Conic Sections.  Associate Professor Dunn.
5.	Differential and Integral Calculus
	Text-book: Osborne's Calculus.  Professor Droke.
6.	Higher Algebra
	Theorems connected with progressions, surd, and imaginary quantities, permutations and combinations, chance, determinants, elimination, and exponential and logarithmic series.  FIRST TERM Text-book: Halland Knight's Higher Algebra Associate Professor Dunn.
7.	Theory of Equations
	SECOND TERM—Todhunter's Theory of Equations.  Professor Droke.
8.	Analytic Geometry of Three Dimensions
	FIRST TERM—C. Smith's Solid Geometry.  Professor Droke.
9.	Differential Equations
	SECOND TERM—Johnson's Ordinary and Partial Differentia Equations.  Professor Droke.

### ELECTIVE COURSES.

10. Advanced Integral Calculus.

Professor Droke.

H.	Modern Pure Geometry.
	For reference: Richardson and Ramsey.  *Professor Droke.*
12.	Modern Analytic Geometry.
	Professor Droke.
13.	Analytical Trigonometry.
	For reference: Loney's Trigonometry.  Associate Professor Dunn.
14.	Theory of Equations.
	This course is a continuation of Course 7. For reference Burnside and Panton's Theory of Equations, and Seriet' Cours D'Algibre Supérieure.  Professor Droke.
15.	Theory of Functions, Elementary Course.  Professor Droke.
	HISTORY AND PEDAGOGICS.
	J. F. HOWELL, Professor.
	HISTORY.

12 . Aid. Ai I III.	A

I	Constitutional History
	Text-book: Fiske's Civil Government; lectures and reading.
2.	General History
	Text-book: Myer's General History; collateral reading.
3.	English History I
4.	Ancient History 2
	In the light of recent discoveries and investigations; Fgypt
	and Israel: Greece and Rome. Lectures and recitations on
	assigned reading.

	Text-book, first term: Howell's Introduction to the Advanced Study of History.
	Study of History.
5.	European History 2
	(a) From the fall of Rome to the fall of Constantinople. Lectures, reports on assigned reading, and topical research. Text-book, first term: Emerton's Introduction to the Middle Ages.
	(b) From the fall of Constantinople to the present time. Lectures, recitations on assigned reading, and topical research
6.	American History 2
	From the close of the Revolution to the present time. I ex- tures, reports on assigned periods, and topical research. Channing and Hart's Guide to American History is used for topical study.
	PEDAGOGICS.
Ι.	Pedagogy 2
	Text-book: White's Elements of Pedagogy, with lectures and collateral reading; methods.
2.	School Management
	Three times a week first term. Text-book: Tompkin's School Management, and collateral reading.
3.	History of Education 2
	Twice a week, second term. Text-book: Painter's History of Education, with collateral reading.
4.	School Law
	Once a week, second term. Decisions of State Supreme Courts on questions relating to the rights and duties of school officers, parents and children; the School Laws of Arkansas. Text-books: Burke, the Law of Public Schools, and the text of the Arkansas school laws.

5.	Science of Education 2
	Twice a week, first term. Text-book: Palmer's Science of Education.
6.	Philosophy of Education
	Twice a week, second term. Text-book: Rosenkranz's

#### ECONOMICS AND SOCIOLOGY.

#### S. J. McLean, Professor.

The courses offered in this department are designed to afford such instruction as will be advantageous to those who intend to enter public life, or those callings which will bring them closely in touch with the activities of public life.

1.	Prine.	iples of	Econom	iics				2
	Recitat	ons, prese	embed rea	dings,	reports	and d	lebates.	Text-
	book:	Walker,	Political l	Econon	ny.			

book: Dunbar, Chapters in the Theory and History of Banking.

- 5. Tariff History and Problems (first t.rm) 2. Special attention will be devoted to the tariff history of the United States. Text-book: Taussig, Tariff History of the United States. This will be supplemented by lectures and use of government documents.

The evolution of the rathoad system, government control, the rate-making question, railroad commissions, etc. Text-book: Hadley, Railroad Transportation. Lectures, prescribed readings, and use of original material.

- This is an advanced course in which social problems, such as the relations of capital and labor, pauperism, crime, social amelioration, immigration, etc., are discussed. Lectures and reports. The student is expected to familiarize himself with official reports bearing on these questions.

### CHEMISTRY AND PHYSICS.

A. E. MENKE, Professor. W. B. BENTLEY, Associate Professor.

Lectures and recit	tations twice	a we	ek; lab	orator	y wor	k one
afternoon through	out the year.	Text	book:	Rich	ter.	
			Pi	ofessor	Men	ke.
Chemical Phil						
instruction in theor				A A		
book: Tilden's		, ,				
Reference books:	Oswald's G	eneral	Chemi	stry, a	nd Mo	eyer's
Theoretical Chemis	stry.					
			iate Pro		FD .	

(12) Recitations twice per week, first term (16) Laboratory work two afternoons per week for engineering students, three afternoons for scientific students, throughout the year. The recitations are occupied with the discussion of problems depending on the principles of qualitative analysis. The object of these discussions is to enable the student to understand the methods of separation as well as to be able to follow them practically. In the laboratory a large number of substances, both simple and complex, are analyzed. Laboratory Manual: Hill's Lecture Notes on Qualitative Analysis.

Associate Professor Bentley.

Organic Chemistry . .... 3 .1. Recitations three times per week throughout the year with laboratory work, if desired. Bernthsen's Organic Chemistry. Associate Professor Bentley.

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5.	Quantitative Analysis
6.	Quantitative Analysis
7.	Three times per week throughout the year. A study of industries having chemical principles and processes for a basis.  Manuals: Wagner, Sadtler.  Associate Professor Bentley.
8.	Physical Chemistry
9.	Assaying
10.	Toxicology
11.	Gas Analysis 1 Practical work once a week throughout the year. This course is designed particularly for technical students.  Professor Menke.

	Biology.
12.	Metallurgy of Iron and Steel
	Three times per week the first term.  Professor Menke.
13.	Water Analysis 3
	One term, three times per week, for civil engineering students.  Professor Menke.
	PHYSICS.
Ι.	General Physics
	Recitations twice and laboratory work once per week throughout the year. Recitations and experimental lectures on mechanics, sound, heat, light, magnetism, and electricity.  Professor Menke.
2.	Electricity and Magnetism 3
	Recitations twice and laboratory work once per week through out the year. Text-book: Silvanus Thomson's Electricity and Magnetism.  Professor Menke.
3.	Physical Measurements
	Measurements in mechanics, sound, heat, light, magnetism, and electricity. Manual: Sabine.  Associate Professor Bentley.
	BIOLOGY.
	J. F. McNeill, Professor.
	BIOLOGY.
Ι.	General Biology 3
	Recitations twice, and laboratory two hours per week. A brief study of typical plants and animals with reference to structure, development, and relationship. This course is

introductory to both Botany and Zoology. Text-books: Parker's Biology; laboratory manual, Bover's Practical Biology.

2. Lectures twice a week for the second term.

One lecture a week for the first half of the hours of laboratory work. Six hours a week laboratory work from March 1 to the end of the term. Designed to give students a general knowledge of the classification of plants and a more particular acquaintance with the seed plants and ferns of Northwest Arkansas, Text-book: Gray's Manual of Botany.

Physiological Botany ...... 3 2. Laboratory work six hours a week from November 15 to March I. Text-book: MacDougal.

#### ZOOLOGY.

General Zoology ....... 3 Ι. One recitation and four hours laboratory work per week. A

general course in animal morphology and systematic zoology. The systematic work will be restricted to vertebrates. Textbook: Hertwig's Essentials of Zoölogy. Laboratory Guide: Jordan's Manual of Vertebrates.

Systematic Zoology ...... 2

Laboratory work four hours per week throughout the year. This course is intended to give students a general knowledge of the vertebrates, especially of mammals, birds, and reptiles of the Mississippi Valley. Laboratory Guide: Jordan's Manual of Vertebrates.

3.	Taxidermy
	Laboratory work two hours per week throughout the year This course is intended to enable students to prepare mam- mals, and bird skins for laboratory and museum specimens.
- <b>1</b> -	Vertebrate Anatomy 3
	Recitations twice per week and dissection of typical verte- brates. Text book: Weidersham's Anatomy of Vertebrates
5.	Animal Histology 5
	Two recitations and eight hours in the laboratory per week first term. Open only to students who have taken Course 2. Text-book: Schafer's Essentials of Histology. Offered only in even years.
6.	Embryology 5
	Recitations twice, and laboratory work six hours per week second term. Of en only to students who have taken Course 4 Text book: Foster and Balfour's Elements of Embryology. Offered only in odd years.
	ENTOMOLOGY.
Ι.	Recitations twice, laboratory work four hours per week. Designed to give a general knowledge of the structure, habits, and classification of insects and a more particular knowledge of the orders Orthoptera and Lepidoptera. Text-books: Comstock's Laboratory Guide: French's Butterflies of the Eastern United States, and other manuals.
2.	Economic Entomology
	This course is a continuation of I, and must follow it. The systematic work for each student will be restricted to one order or family of which he will be expected to make a special study Special attention will be given to breeding and rearing or insects, and to working out the life histories of those species that are little known.

#### GEOLOGY.

#### A. II. PURDUE, Professor.

In arranging the courses in Geology, an attempt has been made to meet the needs of those students who wish to become well grounded in the elements of both the scientific and the practical phases of the subject, and at the same time of those who wish only a brief general culture course. The courses meeting the latter need are numbers 1 and 2. While the other courses are offered specially for those making Geology a major, they can be taken with advantage by anyone who has had course 2.

### 1. Physical Geography and Surface Geology . . . . 3

- (a) Recitations three hours a week during the first term, with special attention to atmospheric and oceanic phenomena. Authors: Davis, Ferrel, Tarr, and Waldo.
- (b) Recitations and lectures three times a week during the second term on the origin of topographic features, with special attention to the development of streams and stream features, and to Glacial Geology. Scott's Introduction to Geology is used as a text, but extensive outside reading is required.

#### 

(a) Structural and Dynamic Geology. Recitations and lectures three times a week during the first term. Text: Scott's Introduction to Geology, with outside reading.

(b) Continental Evolution. Twelve lectures, with collateral reading, three hours a week during a part of the second term on the Evolution of the North American Continent.

	(c) Economic Geology. Lectures, with collateral reading, three hours a week, following Course (b) on the Formation, Modes of Occurrence, Uses and Geographic Distribution of ore deposits.
3.	Practical Geology I
	Field and laboratory work two hours a week throughout the year, with the construction of geological maps and sections, topographic maps, and relief maps.
4.	Paleontology
	Lab natory work, six hours a week throughout the year, on the determination of fossil organisms.
5 -	Crystallography and Mineralogy 2
	<ul> <li>(a) Lectures and recitations two hours a week during the first term on the e'ements of Geometrical Crystallography.</li> <li>Text: Williams's Elements of Crystallography.</li> <li>(b) Laboratory work (two hours) twice a week during the second term. Determination of minerals before the blowpipe, and in the wet way. Text: Determinative Mineralogy, Brush.</li> </ul>
ti,	Field and Special Courses 3
	Students electing Geology as a major will be expected to spend sufficient time in the field for the careful investigation of local geological problems, and to present acceptable theses on the work done. It is advised that the field work be done in connection with the University Geological and Biological Survey. (See page 46.) Special courses will be arranged for those who wish to elect work in addition to what is required.

### PSYCHOLOGY AND ETHICS.

#### PRESIDENT BUCHANAN.

The course offered in these subjects consists of recitations, lectures, and full and free discussions by the members of the class. In connection with a careful examination of the views and opinions of leading thinkers, students are encouraged to study their own mental phenomena and to subject to the test of individual consciousness the various theories which come under investigation. Due attention is given to the recognized contributions of modern Physiology to Psychology. As introductory to this part of the subject, the Professor of Biology gives a course of lectures with accompanying laboratory work in Neurology, which all students whose course includes Psychology, are required to attend during a part of the second term of the Junior year.

Ι.	Psychology			3
	Three times a week, first term.			
2.	Ethics	-0	 **********	2
	Twice a week second term			

### MECHANICAL ENGINEERING.

GEORGE M. PEEK, Professor and Superinendent of Mechanic Arts.

MACK MARTIN, Machine Shop, Forge Shop, Assistant Superintendent of Mechanic Arts.

B. N. WILSON, Wood Shop, Foundry.

Mechanical Engineering directs the design and construction of all forms of machines, and their installation in machine shops, mills and factories. It directs the design, construction, erection and operation of boilers, steam and gas engines, locomotives, turbines and other prime movers; of pumping machinery for waterworks; of machinery and apparatus for the manufacture of ice, the distribution of refrigeration from central stations, and the heating and ventilation of buildings. Since the utilization of the forces and materials of nature is accomplished in nearly all cases by machines, or by processes working through machinery, it is evident that Mechanical Engineering is the basis of all industries.

### I. Shop Work.

(a) Woodsworking. Principles of carpentry and joinery; wood turning; pattern making; cabinet work; finishing; Sickle's exercises in wood turning. One year, four hours per week.

Mr. Wilson.

(b) Founding. Core making; dry and green sand molding; melting and pouring brass and iron; management of cupola. Bolland's Iron Founding. Half year, four hours per week.

Mr. Wilson.

	(c) Forging. Management of fire; drawing; welding; riveting
	and tempering; case hardening and annealing. Half year, four hours per week.
	Mr. Martin.
	(d) Machines Work. Chipping and filing; turning; planing; milling; drilling; grinding; erection of machinery and mill-wrighting. Rose's Complete Practical Machinist. One year, four hours per week.  Mr. Martin.
	(c) Stationary Engineering. Steam fitting; cleaning and firing boilers; management of high speed and Corliss engines. Half year, four hours per week.  Mr
2,	Mechanical Drawing, 2
	Working drawings; freehand sketching; titles; tracing; pre- paring and using blue-print paper. One year, four hours per week.
	Mr. Martin.
3.	Instrumental Drawing
	Drawing of geometrical problems, machine parts, line shading, etc. One year, four hours per week.
.1.	Elements of Mechanism
	Two hours per week, first term. Theory of motion and velocity ratios; designs of gear wheels, cams, link motions, trains of mechanism. Text-book: Stahl and Wood's Elements of Mechanism.  Professor Peek.
5.	Valve Gears 3
	Three hours per week, part of first term. An analytical and graphical treatment of the plain slide valve, shifting eccentrics, link motions, radial, double and drop cut-off valve gears Text-book: Peabody's Valve Gears.

Professor Peek.

Professor Peek.

6.	Indicator Practice
	Methods of using the steam engine indicator in determining horse power, setting valves and adjusting the governors. Three hours per week part of first term.  Professor Peek.
7.	Drawing: Machine Design 2
	A practical study of velocity ratios in mechanism, gears, cams, link work, fastenings, belt and rope gearing. Four hours a week through the year.  Professor Peek.
8.	Drawing: Steam Engine and Boiler Design 2
	A course in the study and design of boilers and steam engine parts, such as pistons, cross heads, frames, main bearings fly wheels, valve gears and governors  Through the year.  Professor Peck.
9.	Steam Engine Design 3
	Three hours per week part of first term. Determination of the proper proportions for cylinders, valves, pistons, rods, shafts, fly wheels, governors, etc.  *Professor Peek.*
10.	Mechanical Laboratory
	Study of processes of blue printing and photography; gas analysis; caloritic power of fuels; friction of belting; tests of lubricants; calibration of thermometers, gauges and indicators; planimeters and indicator cards; engine and boiler trials.  **Professor Peek**
II.	Steam Engineering
	Three times a week, second term. Elementary thermodynamics; types of simple and compound engines; valve diagrams and indicator cards; heat and combustion of fuels: types and care of hoilers. Text-book: Holmes.

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12.	Statics and Dynamics 4
	Four hours per week part of second term. Forces; statics of a material point, of a rigid body, of a flexible cord; motion of a material point; moment of inertia; dynamics of a rigid body; work, energy and power; friction. Text-book: Church's Mechanics of Engineering.  *Professor Peek.*
13.	Strength of Materials 4
	Four hours per week, part of first and second terms. Elementary stresses and strains, tension, compression, shearing, torsion, flexure of homogeneous prisms, continuous girders; flexure of long columns Text-book: Church's Mechanics of Engineering.  Professor Peek.
14.	Hydraulics 4
	Four hours per week, first term. Fluid pressure; pressure in tanks and reservoirs; flotation; gaseous fluids; flow of liquids through pipes and orifices; dynamics of gaseous fluids; impulse and resistance of fluids. Text-book: Church's Mechanics of Engineering.  **Professor Peek**
15.	Graphics 1
	Lectures. One hour per week, first term. Graphical arith metic; force diagrams; moment of inertia; stresses in trusses and mechanism; graphical dynamics.  **Professor Peek.**
16.	Mechanical Refrigeration 3
	Three hours per week, part of second term. Study of fluids available; machinery and apparatus used in compression, and absorption systems; methods of freezing, cold storage;

refrigeration from central stations. Lectures, recitations, and

prescribed reading.

Professor Peek.

17.	Heating and Ventilating 3
	Three hours per week, part of second term. Principles of ventilation; systems of heating, piping, radiators, boilers, forced-blast systems; specifications.  *Professor Peek.*
18.	Pumping Machinery3
	Three hours per week, part of second term. Design, construction, and operation of pumps and pumping machinery, with special reference to waterworks service. Text-book: Barr's Pumping Machinery.  **Professor Peek.**
19.	Turbines 3
	Three hours per week, part of second term. Action of a jet of water on a moving vane; impulse and reaction wheels; modern turbine, form, efficiency, and methods of regulation. Text-book: Trowbridge's Turbine Wheels; Wood's Reaction Motors; Lectures.  **Professor Peek.**
20.	(a) Locomotive Mechanism 3
	Three hours per week, first term. A study of locomotive boilers, cylinders, frames, valve motion and valve setting; various systems of compound locomotives; air brakes. Textbook: Forney's Catechism of the Locomotive Mechanism.  Professor Peek.
20.	(b) Marine Engines 3
	Three hours per week, second term. A study of marine engines, boilers, valve gear, shafting, propellers, etc.  Professor Peek.
21.	Gas Engines
	Two hours per week, second term. History and present types of gas and oil engines; explosion in a closed vessel; the gas engine cycle; efficiency and adaptation of the gas engine. Text-book: Robinson's Gas and Petroleum Engines.  Professor Peek.

#### MECHANIC ARTS COURSE.

This course extends over two years of two terms each and is designed to give more instruction in the practical branches than is offered in the regular engineering course. During the first three terms of this course the student devotes the greater part of his time to work in the various shop departments. The fourth term is devoted to work in one department selected by the student. This plan enables the student to become familiar with the work of each department and to become proficient in the management of the machinery in the one department in which he selects his fourth term's work. The work of the preparatory department in this course is the same as in the regular engineering course. Students who pass the examinations required for entrance to the Freshman class can take up this work without having work in the preparatory department to make up, as they can in the regular engineering course. Upon the completion of this course the student will be awarded a certificate of proficiency.

#### FRESHMAN YEAR.

1 (14.01) 14.01	8 8278 841	
	Hours per	Week.
	First Term.	Second Term.
Mathematics 2		3
Mathematics I	2	2
English I		3
M. E. 2		2
M. E. 1 a, b, c, d	. 7	7
SOPHOMORE	YEAR.	
Mathematics 3, 4	. 5	5
M. E. 4	2	-
M. E. 11	–	3
M. E. 3	2	2
M. E. I. d. e. and elective (shop work	() 8	7

#### CIVIL ENGINEERING.

### J. J. KNOCH, Professor.

The design is to furnish a course of theoretical instruction, accompanied by illustrations and as much of engineering practice as can well be taught in schools. This course will give the student a knowledge of the fundamental principles required to enter intelligently upon the various branches of engineering belonging to this profession.

The special technical studies, which are offered in this course, may be grouped under the heads of Surveying, Applied Mechanics, Road and Railroad Engineering, Hydraulic Engineering, Bridge Engineering, and Sanitary Engineering.

Instruction.—The work in Surveying extends over three years. It embraces land surveying, leveling and United States public land surveys during the Sophomore year; topography, railroad reconnoissance and location during the Junior year; triangulation and geodesy during the Senior year. Much time is devoted to practice in the field and drafting room, this work being carried on parallel with the class room work. Each year a party of engineering students go into camp one week for practice in surveying and locating railway lines,

### COURSES OF INSTRUCTION.

Ι.	Descriptive Geometry2
	Recitation and practice throughout the year. Text-book: Church's Descriptive Geometry.
2.	Surveying
	First and part of second term. Care, use and adjustment of instruments; use of chain, tape, compass, transit, solar attachment, level, sextant and plane table; land surveying, leveling, contouring, laws and instructions relating to surveys of the public domain. Text-book: Raymond's.
3.	Field Practice 3
	Exercises in land, city, and topographical surveying.
4.	Highways
	One hour per week, second term—The location, construction, and maintenance of common, Macadam, and Telford roads; brick, stone, wood and asphalt pavements for city streets.  Text-book: Spalding's Roads, Streets and Pavements.
5.	Railroad Engineering2
	Three hours per week first term, two hours second term. Preliminary surveys and location; transition curves, yards and turnouts; estimates of earthwork and material used in construction; the economics of railway location and management. Text-book: Searle's Field Engineering, and Crandall's Transition Curve and Earthwork Computations, first term; Wellington's Economic Theory of Railway Location, second term.
6.	Field Practice
	Location of curves, turnouts, and Y's; measurement of embankments and cuts, and computation of volumes.

7.	Railroad Survey.
	One week, twelve hours per day. Actual field practice in reconnoissance, preliminary survey and location.
8.	Lettering
	Lettering titles for maps and drawings; round writing.
8.	(a) Drawing 2
	First and second terms. Pen and colored topography.
8.	(b) Maps 2
	Second term. Topographical and railroad maps from actua surveys.
9.	Masonry Construction
	Two hours per week, second term. Use of lime and hydraulic cement mortars: stone and brick masonry foundations; foundations in soft materials on land and under water; cofferdams, cribs and caissons. Text-book; Baker's Masonry Construction.
10.	Mining Engineering
	Lectures one hour per week, first term. Mine surveying blasting, timbering and winning deposits; ventilation, hygiene and mining law.
II.	Roofs and Bridges
	Four hours per week, first term; two hours second term. Theory of computation of stresses by both analytical and graphic methods; full computations, designs and bills of ma-
	terial for a roof truss and railroad bridge. Text-books: Mer- riman and Jacoby's Roofs and Bridges, Parts I. and II.
12.	Sanitary Engineering
	Two hours per week, first term. Calculation and specia

details of construction of sewers, separate and combined	system
of sewerage; purification of sewage; municipal and of	lomesti
sanitation. Text-book: Baumerster's Cleaning and S	ewerage
of Cities.	

## 13. Stereotomy and Drawing ..... 2

Two hours per week, first term. Right and oblique arches; cloisters and domes; isometric projections and drawings for templet patterns; stone cutting. Text-book: Warren's Stone Cutting.

### 14. Arches and Dams ...... 2

Two hours per week, part of first term. Theory of the equilibrium of arches and stability of masonry dams, by both analytical and graphic methods; drawings for complete designs. Text-book: Baker's Masonry Construction.

### 15. Waterworks Engineering ....... . ..... 3

Three hours per week, second term. Study of systems of water supply; collection, purification and distribution of water; location of waterworks, with details of estimate of cost. Textbook: Fanning's Hydraulic and Water Supply Engineering.

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Two hours per week, first and second terms. Test of strength and other properties of materials of construction; tensile and crushing tests of brick, stone and cement; flow of water through pipes, elbows, valves, and measurement by means of weirs.

### 17. Field Practice .. . . . . . . . . . . . . . . . 2

Two hours per week, first and second terms. Topographical survey, triangulation and leveling.

## 18. Drawing. ... 2

Two hours per week, second term. Structural details; working drawings for designs.

# UNIVERSITY OF ARKANSAS LIBRARY

Electrical Engineering.

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### ELECTRICAL ENGINEERING.

W. N. GLADSON, Professor.

Two courses of instruction are offered. The four years' course is intended to afford a good general education, and at the same time to ground the student so thoroughly in the principles of Electrical Engineering as to furnish a good foundation for the profession.

Theoretical and applied electricity and the mechanics of engineering are naturally the leading subjects.

Theory is amply treated and tested by experiments in well equipped laboratories, thus affording the student a degree of facility in the use of instruments and machines which is acquired only by continued practice. As a requisite for graduation, each candidate must present an acceptable thesis, embodying the results of special study. The subject of such study must lie within the field of Electrical Engineering. It must be announced not later than the beginning of the second term of the senior year, and be approved by the Professor in charge. The completed thesis must be submitted not later than two weeks before commencement day, and one copy must be deposited in the library as the property of the University.

The short course of two years is designed for students lacking time and preparation for the full

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designed by student.

course, and is intended especially for those students who have had some practical experience in engineering. The work is more elementary than in the long course, embracing only the necessary mathematics. which with physics, electrical engineering and laboratory work, gives the student sufficient theory, supplemented by practice, in the shortest possible time.

This course prepares students for practical work. such as superintending or managing lighting, power or manufacturing plants. It does not lead to a degree, but a suitable certificate will be given on completion of the work.

Practical Management of Dynamos and

Motors .....

	Recitations. Second term, two hours a week. A practica
	treatise on installing, starting, testing, locating and remedying
	faults in dynamos and motors. Text-book: Crocker &
	Wheeler's Practical Management of Dynamos and Motors.
2.	Contracts and Specifications
	One hour a week, second term. A study of contracts as applied to engineering work; specifications for electrical
	installations. Text-book: Merrill's Electric Light Specifica
	tions.
3	Technical Drawing

4.

Lectures and practice four hours a week throughout the year; an extension of Course 3, and must be preceded by it.

Lectures and practice two afternoons a week throughout the year. Working drawings of electrical apparatus; wiring plans Drawings of circuit and machine, electrical calculations and

	mechanical designs of electrical machinery; complete power plants designed by student.
5.	Electrical Laboratory 2
	One afternoon a week throughout the year. An extended course in magnetic and electrical measurements; current, electro-motive force, and resistance; use and calibration of instruments, voltmeters, and potentiometers; exploration of magnetic fields; dynamo work begun.
6.	Electrical Laboratory 2
	One afternoon a week throughout the year. This is an extension of Course 5, and must be preceded by it. A full experimental course in operating and testing direct and alternate current machines; transmission, storage, and transformation of electric energy. Special courses given suited to the preparation and object of the student.
7.	Dynamo Electrical Machinery 5
	Recitations. First term, five hours a week. Confined chiefly to direct current apparatus, including types of motors, generators, and transformers: design, calculations, construction, testing, and operating. Text-book: Thompson's Dynamo Electric Machinery.
S.	Theory of Alternate Currents 2
	Recitations twice a week throughout the year. Text-book: Flemming's Alternate Current Transformer, Volume I.
9.	Alternate Current Machinery 3
	Recitations and lectures three times a week, second term. Text-book: Flemming's Alternate Current Transformer, Volume II.
10.	Electric Railways 2

Recitations and lectures, twice a week, second term.

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### DEPARTMENT OF AGRICULTURE.

#### AGRICULTURE.

#### C. L. NEWMAN, Professor.

The degree conferred upon the satisfactory completion of this course is Bachelor of Scientific Agriculture. A two years' course is provided for students who cannot remain to complete the full course.

Agriculture is both a science and an art, and the course of instruction is so mapped out that the student may master both the principle and the practice of the industry that gives employment to three-fourths of the State's inhabitants. The student is encouraged to discover, plan and execute for himself, and his daily association with specialists keeps him abreast with the many sciences which compose the conglomerate science of agriculture.

Manual labor is required of students only for purposes of instruction and illustration. While each student is expected to be proficient in the use of both farm tools and machinery, it is not proposed to make a farm laborer of him, but a director of farm labor.

### 1. Introduction.

Definition of scope of subject; relation to science, history, etc.

### Soils.

Origin, classification, properties, relation to climate and crops; drainage: irrigation; hygiene and general management of soils; special management for special purposes.

### 2. (a) Farm Crops.

Farm manures and germ manuring; preparation and culture; food plants, forage and hay plants, root crops, pastures; textile, oil and sugar plants; harvesting.

### (b) Farm Buildings, Machinery and Tools.

Construction and management of stables, barns, dairies, silos, pigeries, sheepfolds, poultry houses; farm fences and roads. Management and utility of farm machinery and tools.

### 3. Zootechny.

Breeds and breeding of horses, cattle, sheep, swine, goats, poultry, etc., and their specific and general management; aviculture; pisciculture; insecticides.

### 4. Rural Economy.

Farm rules and management; hired labor; farm accounts; markets and marketing; meteorology.

### HORTICULTURE.

JOHN T. STINSON, Professor.

In addition to the regular work in horticulture, a special course in science with horticulture is offered. The schedule is given on another page. This course enables students to begin work in science earlier than in the regular courses. The requirements for admission to this course are a knowledge of the following subjects: Advanced Grammar, Complete Arithmetic, Complete Geography, United States History, and proficiency in Reading, Writing and Spelling.

I.	(a) Propagation of Plants 3
	First half of second term. General nursery work—budding, grafting and general care of nursery stock.
	(b) Vegetable Gardening 3
	Last half of second term. A study of the leading vegetables adapted to the State, forcing vegetables and general gardening, with practical work in growing vegetables for market.
2.	(a) Orcharding and Small Fruits
	First half of second term. A study of the fruits best adapted to the State, their culture, marketing, etc.
	(?) Spraying of plants for fungous diseases and injurious insects. Twelve exercises. Landscape gardening. Fifteen exercises.
3.	(a) Plant Breeding3
	First half of second term. Crossing of plants, originating new varieties, plant variation, etc.
	(b) Physiology of Plants.
	Last half of second term. The study taken up from a horticultural standpoint.
4.	(a) Experiment Work with Fruits.
	And a study of the evolution of certain fruits and vegetables.

### (b) Forestry.

Second term. A study of the forestry of the State from an economic standpoint.

Students taking horticulture as an elective may take horticulture 1 and 2 two hours per week for the whole year.

### AGRICULTURAL CHEMISTRY AND METEOROLOGY.

	G. L. TELLER (Experiment Station).
I.	Agricultural Chemistry
	Lectures and recitations on the chemistry of plant nutritive and growth, soils, manures, foods, and feeding and dair products.
2.	Meteorology
	A study of winds, storms, rainfall, and changes of temperature in soils and air; weather forecasts; relation of weather and climate to plant growth and preservation. Opportunities will be given for the students to become familiar with the instruments used in making and recording weather observations.
	VETERINARY SCIENCE AND BACTE-
	RIOLOGY.
	R. R. DINWIDDIE (Experiment Station).
Ι.	Comparative Anatomy of the Domesticated Animals
	Equine Anatomy is studied in detail and compared with the of other species of farm animals.
2.	Veterinary Hygiene
	SECOND TERM—Under this head is included the elements of hygiene as applied to the care of live stock, with a discussion of the causes and modes of prevention of parasitic and communicable diseases.
3.	Bacteriology
	FIRST TERM—A study of the bacteria in their relation to Agr

## MILITARY SCIENCE AND TACTICS.

## FIRST LIEUTENANT W. P. STONE, Fourth Artillery.

Ι.	Practical Work 3
	Three hours per week. In school of the soldier, squad,
	platoon, company, and battalion, close and extended order;
	ceremonies of grand mounting, dress parade, inspection and review; camping, guard duty, target practice, laying out field
	works, and signaling. In this work, the cadet officers act as
	instructors, thus putting into practice the knowledge gained in
	previous years.
2.	Recitations and Lectures
	One hour per week. Infantry Drill Regulations (U. S. Army. Part I.). Manual Guard Duty (U. S. Army).
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3.	Recitations and Lectures
	One hour per week. Infantry Drill Regulations (U.S. Army
	Part II.). Small Arms Firing Regulations (Blunt).
.1.	Recitations and Lectures
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	One hour per week, Military Field Engineering (Beach). Military Signaling United States Army Signal Code).
	stituty ingularing to the state of their organic contest.
5.	Recitations and Lectures
	One hour per week. Service of Security and Information
	(Wagner). Military Law (Winthrop).

#### ELOCUTION.

#### JESSIE L. CRAVENS, Instructor.

The course of instruction comprises a thorough training in the essentials of expression.

## I. Physical Training.

The course includes thorough drill in (a) Light Gymnastics, to promote health and to give vigor and tone; (b) Athletic Gymnastics (in accordance with the law of Delsarte), for the attainment of grace, precision, and harmony in action.

#### 2. Voice Culture.

- (a) Respiration: Natural breathing; economy of breath; drill in deep, effusive, expulsive, and explosive forms, as a basis for voice work.
- (b) Voice culture: Exercises for the production and cultivation of open, pleasing, and musical tones; to avoid shrill and loud tones.
- (c) Articulation: Correct use of the articulatory organs; exercises upon elementary sounds, separately and in combination; syllabication, accent, and pronunciation; defects of speech.

## 3 Expression.

In Reading, Recitation, and Oratory Modulation, inflection, emphasis, pitch, quantity and movement: qualities: application of tone effects; light and shade in tone; transitions; pause effects: facial expression; action and repose; naturalness; clearness.

Text books: The books in use and for reference are Southwick's Elecution and Action, Stebbins's System of Expression; Fulton and Trueblood's Practical Elecution, Hudson's Shakespeare, Werner's Readings and Recitations, etc.

This department is open to all students in the Collegiate classes and to the second year students of the preparatory school. Twice a week for each class.

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#### MUSIC.

## I. PIANOFORTE, HARMONY, AND MUSICAL HISTORY.

#### MISS ANNA LAIRD.

#### First Year.

Theoretical Radiments: Graded Materials for Study, W. S. B. Matthews: Kohler's Etudes, Op. 50; MacDougail's Melody Playing: thirty selected studies from Heller; Mason's Technics.

#### Second Year.

Matthews's Phrasing and Interpretation; Loeschhorn's Etudes, Op 60 and 67; Bach's Lighter Pieces; LeCouppey's Op. 26; Krause's Tull Studies, Op. 2; Doring's Op. 24; Mason's Technics; selections from Mozart, Schumann, Mendelssohn, and the best modern composers.

#### Third Year.

Harmony and History of Music; Heller's Art of Phrasing; Cramer's Select Studies. Von Bulow Edition; Bach's Inventions; Selected Octave Studies; Haberbier's Etude Poesies, Op. 53; Clementi's Gradus ad Parnassum; Mason's Technics; selections from Haydn, Beethoven, Schubert, Schumann, Chopin, and the best European and American composers.

#### Fourth Year.

Analytical study of the principal works of the great masters.

Chopin's Op. 10 to 25; Bach's Preludes and Fugues; Cramer's Selected Studies; Moscheles's Op. 70; Kullak's Octave Studies; Kessler's Op. 20; Schumann's Etudes; Mason's School of Octaves and Brayura.

The aim of this course is the development of a higher degree of technique, interpretation, and general musical intelligence to make musicians as well as performers.

Classes in Normal training will be formed for those who wish to become teachers of music.

#### II. VOICE CULTURE AND VOCAL MUSIC.

#### MISS GERTRUDE CRAWFORD.

True cultivation of the voice consists in the development of pure tone, and its easy, natural use and control in singing.

Attention is given to respiration as an art applicable to singing; position of mouth and tongue, and control of the face in singing; emission of voice on vowels; exercises for uniting the registers; practice on sustained tones in the entire range of the voice; exercises in agility and velocity; exercises in articulation of consonants and vowels; study of delivery and expression; the formation of good style, etc.

Garcia's Vocal Exercises, Concone, Bordogni, Marchesi, Panseron, and other technical works; songs of the English, Italian, French and German Schools; church music; study of opera and oratorio.

#### TERMS.

18 weeks, two lessons per week, Pianoforte and	Voice Cul-	
ture, each	722.50	()
Harmony in class	5 00	)
Use of pianoforte for practice	2.50	)

Tuition payable in advance.

No deduction will be made except in case of prolonged illness.

Instruction in Guitar and Mandolin playing given.

## ART DEPARTMENT.

MRS. JENNY DELONY RICE, Director.

(Student of the "Beaux Arts for Women" and "Julien" Ateliers, Paris.)

## Branches Taught.

Charcoal, crayon, pencil, pen and ink drawing, oil, water color, pastel, tapestry and china painting.

Special classes in industrial designing and illustrating, ornamental and decorative work.

The Art Club for study and quick sketching meets once a week, when lectures are delivered on Art History.

The full course covers four years, but students will be advanced individually, and no hindrance will be imposed upon those who can complete the course in less time.

#### COURSE OF STUDY.

#### First Year.

ELEMENTARY DRAWING-Light and Shade.

- I. Construction of lines.
- 2. Drawing in outline from geometric solids.
- 3. Drawing in outline from casts.
- 4. Drawing in outline from still life.
- 5. Study in light and shade.
- 6. Perspective, theory and applied.

#### Second Year.

#### DRAWING AND PAINTING.

- 1. Still life groups from objects.
- 2. Landscapes from studies and nature.
- 3. Fruit, flowers and foliage from nature.

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## 114 Arkansas Industrial University.

- 4. Perspective, lights and shadows.
- 5. Designs for wallpaper, carpets, etc.
- 6. Historic ornament, decoration.

#### Third Vear.

PAINTING IN OIL, WATER COLORS AND PASTEL.

- 1. Heads from the cast, shaded.
- 2. Figure from the antique, shaded.
- 3. Still life studies in oil, water color or pastel.
- 4. Fruits and flowers from nature.
- 5. Landscape from nature and studies.
- 6. Original composition and design.

#### Fourth Year.

PORTRAITURE FROM LIFE, FIGURE AND LANDSCALE PAINTING BOOK ILLUSTRATION.

- 1. Portraits from life.
- 2. Animals, landscape, marine.
- 3. Interior decoration.
- 4. Composition, genre subjects.
- 5. Illustration of books, magazines, etc.
- 6. Practical and applied design.

#### TERMS.

1.	Art alone per	year	15.00
	Payable first	term	10.00
	Payable seco	nd term	5.00

Those who pay the tuition fees for the course in Art have the privilege of taking one or more studies in any of the other courses, subject to the approval of the Professor concerned.

Students of the University having not less than eight recitation hours per week, are not charged for instruction in the Art Department.

No student below the Sub-Freshman class will be admitted to the Art Department. Pupils will consult Mrs. Rice with regard to the Department and materials needed.

## THE NORMAL COURSE.

Normal students must consult Professor Howell immediately after registration.

Section 6974 of the Revised Statutes of the State is as follows: "The State Superintendent of Public Instruction shall have power to grant State certificates, which shall be valid for life, unless revoked, to any person in the State who shall pass a thorough examination in all those branches required for granting county certificates, and also in algebra and geometry, physics, rhetoric, mental philosophy, history, Latin, the Constitution of the United States, and of the State of Arkansas, natural history, and the theory and art of teaching."

This course includes all the branches required for a State certificate in accordance with the law, and leads to the degree of Licentiate of Instruction (L. I.). After completing the Normal Course, students may take up in the Junior Class the work of any course for which they may be prepared, and compete for the corresponding degree.

	FRESHMAN YEAR.	Ho
Botany I .		
English t	*************************************	
	SOPHOMORE YEAR.	
English 2		
History I		
History 2		
Pedagogics 2, 3 and 4		
Physics I		

## UNIVERSITY EXTENSION.

The purpose of University Extension is to give instruction to persons who are unable to attend the University, and who wish to devote a limited portion of their time to study and culture. It is especially helpful to those who have already begun collegiate courses of study, or have had good high school courses, but persons of ordinary general information may derive much benefit in this way.

The officers of the University hold themselves in readiness to give, within the State, courses of lectures at any conveniently accessible place, where such lectures may be desired.

Printed synopses for each course will be sent in advance for all persons who pledge themselves to study the course, and who register for it with the local manager. With these synopses there will be references to good literature on the subject, and other information. In connection with the lectures there will be further explanation in conferences or quizzes; and all persons who have attended the lectures, have the privilege of being examined upon their work and of having their credits entered on the University records. Persons who have passed satisfactory examinations upon twelve extension courses of six lectures each, will receive a University extension certificate.

For a course of lectures no charge will be made beyond the expenses of the lecturer. This charge may be met by a small fee, paid in advance to the local manager, for each person attending the lectures.

Correspondence on the subject should be addressed to the President of the University.

#### SINGLE LECTURES FOR ARKANSAS COMMUNITIES.

Wishing to make the University a direct benefit to the largest possible number of the citizens of Arkansas, the Faculty offer a number of single lectures free to schools in the State, to societies of a religious, scientific, or literary character, or to communities seeking general culture. In all cases the lecturer's expenses must be paid; but no further charge is made by the University, if the lecture is free to the public, or if the admission fee is merely a sum intended to cover the lecturer's expenses.

#### AIDS TO PRIVATE STUDY.

The University will do all in its power to aid and stimulate culture in every form; and references, advice, and any other help that may be practicable, will be cheerfully given to citizens who wish to follow courses of reading, either special or general, or to make scientific investigations, or to acquire useful information of any kind.

## TEACHERS' NONRESIDENT COURSES.

The University offers special opportunities to all teachers in Arkansas. It will admit them to its regular examinations for admission to the Freshman class, or will send the examination questions to county examiners, who will submit them to teachers

under the usual rules and return answers to the University. Teachers who pass the required entrance examinations, may then matriculate and enter upon nonresident courses of study under direction of the University Professors; and upon completion of one term's work in any branch, they will be examined upon said work and credited with it, if it comes up to the University standard.

After finishing three-fourths of the course for a bachelor's degree, such teacher-students may graduate by completing the course as regular resident students.

Nonresident study is pursued under disadvantages, and none but energetic and methodical persons, who are willing to practice much self-denial, can succeed in such work. Such courses of study are in many respects less thorough than study under regular instruction at the University. Yet thousands of persons who cannot attend college regularly, are thus educating themselves; and the self-reliant habits of study and investigation acquired by successful work of this kind are of untold value.

Teachers accepting this offer must obtain not less than two credits (two subjects passed for one term, or one subject for two terms), each year; else their names will be dropped from the rolls. Teachers whose vacation occurs during the session of the University, may supplement their nonresident study by attending the regular classes.

## PREPARATORY SCHOOL.

#### INSTRUCTORS.

W. A. CRAWFORD, Principal, Mathematics.
G. A. Cole, Mathematics, Physiology and Bookkeeping.
MRS. MARY WASHINGTON BROWN, History and Mathematics.
NAOMI J. WILLIAMS, Latin.
MRS. E. W. Cole, History and Mathematics.
MARY A. DAVIS, English and History.
LINA REED, English and Latin.
JESSIE L. CRAVENS, Elocution.
MACK MARTIN, Foundry and Forging.
B. N. WILSON, Woodwork and Foundry.
GERTRUDE S. CRAWFORD, Vocal Music.
ANNA LAIRD, Instrumental Music.

The collegiate teachers of the University assist in the Preparatory School whenever needed and it is practicable for them to do so. During the past year the following officers have rendered assistance: W. B. Bentley, Chemistry; G. W. Droke, Mathematics; S. J. McLean, Civil Government.

The Preparatory School is intended, first, to prepare students for any of the courses of study taught in the University; second, to furnish to those who cannot take a more extended course, as good a general education as the limited time will permit; third, to prepare teachers for the public grammar schools of the State. To secure these ends, three courses of study are offered, viz: Arts (a), engineering (e) and science (s).

#### REQUIREMENTS FOR ADMISSION.

- 1. Arithmetic.—Students are examined in the whole of the Grammar School Arithmetic and an accurate knowledge of all this is rigidly required. Teachers preparing pupils for admission should require them to learn principles and definitions accurately and to analyze every example capable of analysis, and should give them thorough drill in mental arithmetic.
- 2. English Grammar,—Maxwell's Elementary Grammar.
- 3. Geography.—The whole of some complete manual of Geography.
- 4. Reading, Spelling and Writing.—Proficiency in these subjects is tested by the examination in Grammar,

Note.—Candidates for second year, general course, will be examined in Arithmetic, Algebra to fractional equations, Maxwell's Advanced Grammar, History of the United States, Descriptive Geography, and Latin (Collar and Daniell).

Scientific and Engineering students are not examined in Latin, but in Physical Geography and in Bookkeeping instead. Students entering after the session has begun will be examined also in the work passed over by their classes.

#### ORDER OF EXAMINATIONS FOR ADMISSION.

Wednesday, September 14, 9 a. m., registration of students; 1-4 p. m., Algebra, Geography.

Thursday, September 15, 9-12 m., Arithmetic; 1-4 p. m., Latin.

Friday, September 16, 9-11 a. m., English Grammar; 11-12 m., English Composition; 1-4 p. m., United States History, General History.

#### DETAILED WORK OF COURSES.

#### FIRST YEAR.

Mathematics, 5 .- Milne's Standard Arithmetic, Reviewed:

Wentworth's Higher Algebra to Fractional Equations; Phillips and Fisher's Plane Geometry, two books.

English, 4.—Maxwell's Advanced Grammar; Lamb's Tales from Shakespeare; four original essays per term, corrected and copied; Guerber's Myths of Greece and Rome.

Parallel Reading. -Bunyan, Pilgrim's Progress; Father Ryan, The Conquered Banner, The Sword of Lee; Goldsmith, The Vicar of Wakefield; Lowell, The Vision of Sir Launfal; Cooper, The Last of the Molicans; Pike, Isadore, Every Year; O'Hara, The Bivouac of the Dead; lives of the above authors.

Latin, 4.—Collar and Daniell's Beginner's Latin.

History, 3. Chamber's United States History and Hempstead's History of Arkansas.

Geography, 3 - Redway and Hindman's Natural Advanced Geography.

Bookkeeping, 1-Messervey's Bookkeeping.

Woodworking, 4. Principles of carpentry and joinery; wood turning; pattern making; cabinet work. Sickel's Exercises in Woodworking.

Freehand Drawing, 2.—Practice work; outline drawing from models and machine parts; plans, elevations, sections, dimensions, etc.

#### SECOND YEAR.

Matiematics, 5.—Wentworth's Higher Algebra, Phillips and Fisher's Plane Geometry, completed to Logarithms.

In Shak, 4.—Raub's Rhetoric; five essays per term corrected and copied; Burke, Conciliation with America; Carlyle, Essay on Burns; Shakespeare, Julius C.esar; Milton, Paradise Lost, I. and H.

Parailel Realing. Goldsmith, The Vicar of Wakefield; Lowell, The Vision of Sir Launfal; Cooper, The Last of the Mohicans; Dryden, Palamon and Arcite; Hawthorne, The House of the Seven Gables; Coleridge. The Ancient Mariner; The Coverley Papers in the Spectator; DeQuincey, The Flight of a Tartai Tribe; Pope, Homer's Iliad, L., VI., XXII., and XXIV.

Latin, 4. Four books of Clesar, or an equivalent; Bennett's Grammar and Exercise Book.

History, 3.—Barnes's General History.

Physiology, 2.—Martin's Human Body, Briefer Course, with experiments.

Chemistry, 2. - Williams's Introduction to Chemical Science; lectures and written work.

Civil Government, 2. -McLeary's Civil Government, Arkansas and The Nation, and Johnson's History of American Politics.

Founding, 2.—Molding; melting and pouring brass and iron; management of cupola. Bollard's Iron Founding; lectures and practice.

For zing, 2 Management of fire; drawing; welding; riveting; tempering. Lectures and practice.

Mechanical Drawing, 2.—Drawings of machine parts; lettering; line shading, etc.

Note.—In the above courses the figure after each subject indicates the number of hours per week.

#### SUBJECTS AND COURSES.

#### FIRST YEAR.

Subjects.	Hours per week.	Courses Required.		
Arithmetic	4 3 1	A A A A A	E E E E E E E	S   S   S   S

#### SECOND YEAR.

Subjects.	Hours per week.	Courses Required.		
Algebra	3 2 4 3 2 2 2 4 2 1	A	E   E   E   E   E	S S S S S

NOTE.-In this table. A, Arts, E, Engineering; S, Scientific.

Special courses of study are not allowed in the Preparatory School, but students known to be in poor health or having physical defects which interfere with their studies, are sometimes permitted by the Faculty to defer one or more subjects of study and extend the course over a longer period.

Students who have at any time been enrolled in the Preparatory School, must complete thirty-six hours of work before dropping preparatory studies; and studies in lower classes have precedence over higher ones. A student in the Preparatory School is a member of the highest class with which he has as many as nine recitations per week.



## THE MEDICAL SCHOOL.

LITTLE ROCK, ARK.

#### BOARD OF TRUSTEES.

J. A. DIBRELL, M. D., Little Rock, Ark.

WM. B. LAWRENCE, M. D., Batesville, Ark.

WILLIAM THOMPSON, M. D., Little Rock, Ark.

#### FACULTY.

JNO. L. BUCHANAN, M. A., LL. D., President of the University.

P. O. HOOPER, M. D., Emeritus Professor of Practice of Medicine.

JAS. A. DIBRELL, M. D.,
Professor of General, Descriptive and Surgical Anatomy and
President of Faculty.

EDWIN BENTLEY, M. D., Professor of Principles and Practice of Surgery.

JAS. H. SOUTHALL, M. D, Professor of Practice of Medicine.

ROSCOE G. JENNINGS, M. D., Professor of Clinical Surgery and Dermatology.

C. WATKINS, M. D., Professor of Physical Diagnosis and Clinical Medicine.

JAMES H. LENOW, M. D., Professor of Diseases of Genito-Urinary Organs. L. P. GIBSON, M. D.,

Demonstrator of Anatomy and Adjunct Professor of Anatomy.

LOUIS R. STARK, M. D., Professor of Gynecology.

E. R. DIBRELL, M. D., Professor of Physiology.

FRANK VINSONHALER, M. D., Professor of Ophthalmology and Otology.

T. N. ROBINSON,
Professor of Medical Chemistry and Toxicology.

W. H. MILLER, M. D., Professor of Obstetrics and Prosector of Anatomy.

F. L. FRENCH, M. D.,
Adjunct Professor of Materia Medica, Therapeutics, Hygiene
and Botany.

All communications should be addressed to

E. R. DIBRELL, M. D.,

Secretary of Faculty,

Little Rock, Ark.

## TWENTIETH ANNUAL ANNOUNCEMENT

OF THE

# ARKANSAS INDUSTRIAL UNIVERSITY MEDICAL SCHOOL.

The Regular Winter Course of lectures will begin on Thursday, October 13, 1898, and continue six months.

Lectures will be delivered daily during the six days of each week.

The matriculation book will be opened from and after September 1 to students desiring to matriculate early and secure choice of seats.

In making this annual announcement the Faculty feel great satisfaction in referring to the continued success and prosperity of the Medical Department. The cordial indorsement of the Arkansas Medical Society and the generous influence of the medical profession throughout the State is highly appreciated and encourages the Faculty to continue the arduous labors they have so long and zealously maintained.

## FOUR YEARS' GRADED COURSE.

First Vear. — Anatomy, Practical Anatomy, Physiology, Chemistry, Physics, Histology and Medical Ethics.

Second Year.—Anatomy, Practical Anatomy, Physiology, Chemistry, Materia Medica, Pathology, Obstetrics.

Third Year.—Materia Medica and Therapeutics, Toxicology, Obstetrics and Diseases of Children, Physical Diagnosis, Diseases of the Eye and Ear, Practice of Medicine, Surgery.

Fourth Year.—Review of all branches, Practice of Medicine, Surgery, Dermatology, Gynecology, Bacteriology, Urinology, Venerial Diseases, Diseases of the Nervous System, Medical Jurisprudence.

#### MATRICULATION.

As required by the rules and regulations of the "Association of American Medical Colleges," students on matriculating are required to present credentials showing that they are matriculates or graduates of recognized colleges of literature, science or arts, of high schools, academies, normal schools, or equivalent schools, or that they have teachers' certificates.

Graduates and matriculates in Medicine, Dentistry or Pharmacy, on presenting credentials showing such, are exempt from the entrance examination.

To avoid delay, students entitled to matriculate without examination are requested to bring their certificates with them and present them on arrival at the college.

Students not entitled to exemption, as hereinbefore provided, are required to pass an entrance examination, with the following requirements: the writing of an English composition of not less than 200 words; the translation of easy Latin prose; a knowledge of the elements of Arithmetic or Algebra, and of elementary Physics.

#### LOCATION.

The city of Little Rock is conveniently situated in the center of the State, and railroads enter from every direction, making it easily accessible.

It has a population of more than 40,000, and has always been classed as one of the most healthful cities west of the Mississippi River. Few places can boast of better public schools, colleges and universities than Little Rock. All the eleemosynary institutions of the State are located here. These are the School for the Blind, Deaf Mute Institute and the Insane Asylum.

#### MEDICAL SCHOOL BUILDING.

The new structure is an imposing edifice, three stories in height, constructed of brick and admirably arranged for the convenience of both students and instructors.

It has a large lecture hall, a fine amphitheater with chairs, a library, a reading room, a museum, several dissecting rooms, all well lighted and ventilated. In fact, it is designed to be a modern and model medical college building. It is situated on Second and Sherman streets,

#### HOSPITALS.

The Logan H. Roots Memorial Hospital.—By the munificence of the late Col. Logan H. Roots and the benevolence of his widow the city of Little Rock is to have an elegant public hospital.

The commodious building is now completed.

The Medical Department of the University is fortunate in having this hospital situated on lots adjoining their own building, thus promising greatly increased clinical facilities.

The Little Rock Infirmary, designed solely for the treatment of acute diseases, has a capacity of fifty beds. This hospital is splendidly equipped and furnished with modern conveniences and improvements, is in the very best sanitary condition, and under the supervision and management of trained nurses, Sisters of Charity.

The Pulaski County Hospital, erected at a cost of some \$30,000, is a handsome brick structure, well arranged, complete in all its equipments and has a capacity of 200 beds.

Accidents from railways, marine patients, and the sick and injured from the city, county and State, find in these hospitals shelter, food, raiment and that Christian attention so cheering and comforting in sickness and distress.

The inmates of these different institutions embrace all classes and conditions of people—white, colored, male, female, adults and children—and with them are found almost every form of malady except quarantinable diseases, which are otherwise provided for.

## "THE ISAAC FOLSOM CLINIC."

This clinic is thus designated in honor of the personal life of Dr. Folsom and the friendship and interest this honorable physician and philanthropist

entertained for the Medical Department. He legally executed an instrument of writing endowing this clinic with \$20,000, thus perpetuating the *Isaac Folsom Clinic* as a part of this institution.

Every student of this department is required to attend this clinic, and each candidate for graduation must pass an examination on the clinical instruction therein received, and this fact will be specially mentioned on the face of his diploma.

The daily instruction in this clinic is thoroughly practical, and is attended by a large number of outdoor patients from the city and surrounding country. It embraces a wide range of diseases and injuries.

#### METHODS OF TEACHING.

Instruction will be given by didactic and clinical lectures, practical work in the dissecting room, chemical and physiological laboratories, and by daily quizzes upon the subject of preceding lectures.

When the subject will admit of it, each branch will be so illustrated by means of diagrams, charts, models and instruments, as to address the understanding of the student through the medium of sight as well as hearing.

## EXPENSES OF LIVING, ETC.

The expenses of living in the city of Little Rock will, of course, vary according to the views and habits of students. Good board, at the present time, including lodging, fuel and lights, may be had at a convenient distance from the College, at from \$4 to \$6 per week, and from \$13 to \$18 per month.

Students on their arrival are requested to visit the University building, corner Second and Sherman streets, where a list of parties desiring to board medical students will be found.

Persons desiring further information are requested to address the Secretary of the Faculty.

#### TERMS.

#### The fee for a full course of lectures will be:

General Ticket	50.00
Matriculation Ticket (paid but once)	5.00
Demonstrator's Ticket (for each course)	5.00
Hospital Ticket (each course)	3.00
Graduation Fee	25 00

No variation is made, under any circumstance, from the established fees of the College, they having been placed originally at the very lowest figure commensurate with the interests of both student and College.

For more specific information and catalogue apply to

## E. R. DIBRELL, M. D.,

Secretary of Medical Faculty,

Little Rock, Ark.

NOTE.—Alumni are requested to inform the Secretary of their present post office address, and if any change if locate u, in order that they may have the annual catalogue forwarded them regularly.

# LAW DEPARTMENT ARKANSAS INDUSTRIAL UNIVERSITY,

LITTLE ROCK, ARKANSAS.

JOHN L. BUCHANAN, M. A., LL. D., President of the University.

> \*F. M. GOAR, LL. B., Dean of the Law Department.

J. H. CARMICHAEL, LL. B.

The Law Course embraces two years divided into four terms. Fall term will commence October 1, and close January 31. Spring term will commence February 1, and close June 1.

#### COURSE OF INSTRUCTION.

The design of this school is to afford such training in the fundamental principles of the law, as will constitute the best preparation for the practice of the profession anywhere in the United States, and especially in the State of Arkansas. With this view the course of study, which is intended to occupy the student two years, will comprise the following subjects:

<sup>\*</sup>Deceased. J. H. Carmichael was elected to fill the vacancy caused by the death of Judge Goar.

## JUNIOR YEAR.

First Term.—Contracts, Lawson; Agency, Lectures; Partnership, Lectures; Commercial Paper, Tiedeman; Evidence, Greenleaf, Vol. 1.

NOTE. -This course of the first term of the junior year is specially adapted to those who contemplate a commercial life. or life other than the profession of law. It is a heavier course than Commercial Colleges can afford to give, but a knowledge of the subjects of the course is indispensable to a successful business career. TERMS FOR THIS COURSE. \$25.

Second Term.—Criminal Law, Harris; Pleading, Stephen; Code Pleadings, Bliss; Judgments, Lectures; Domestic Relations, Lectures; Moot Courts.

#### SENIOR YEAR.

First Term.—Law of Private Corporations, Cook; Municipal Corporations, Lectures; Bailments, Schouler; Insurance, Lectures; Torts, Cooley; Moot Courts.

Second Term.—Real Property, Tiedeman; Equity Jurisprudence, Bispham; Constitutional Limitations, Cooley; Conflict of Laws, Lectures; Fraud and Fraudulent Conveyances, Lectures; Leading Cases; Moot Courts.

Students will be matriculated at any time. Books can be purchased here. We do not think it prudent for students to devote less than two years to the foregoing course. "He who is not a good lawyer when he comes to the bar, will seldom be one afterwards," is a saying full of truth.

Thought as well as reading is necessary to the proper understanding of our system of jurisprudence. No man can hope to be a good lawyer by the cramming process. While students are advised not to attempt to complete the full course in a single year, yet if one chooses to make the effort, and has acquired sufficient knowledge of the law from previous reading, he will be admitted to the graduating examination, and if he attains the standard required, he is entitled to his degree. Every candidate for the honor degrees will be required to attend the full term of two years.

#### EXPENSES.

Tuition, \$50 per session, payable \$10 in advance and \$5 per month thereafter during the session. Books will cost from \$20 to \$30 per year. Board from \$15 to \$20 per month; by the club system, where the students do their own work, from \$6 to \$10 per month.

Cheap lodgings may be obtained by consulting the Dean before the opening of the session, and the cost of living need not be greater in Little Rock than elsewhere in the State.

Many reasons may be given why young men, contemplating the practice of law in Arkansas, should patronize their own law school: 1. In the application of the elementary principles of law in the practice, the reference books must be in the main to the laws of the State where the law school is located, as found in the Constitution, Statutes, and Supreme

Court Reports of the State. 2. Emulation and class organization will do much for the law student.

The old way of serving a term in a private law office of a senior at the bar is fast yielding to more modern and better methods.

"The time has gone by when an eminent lawyer in full practice can take a class of students into his office and become their teacher. Once that was practicable, but now it is not. The consequence is that law schools are now a necessity."—Chief Justice Waite.

The law department at Little Rock is exceedingly fortunate in its surroundings. Students have free access to the Supreme Court Library of about 20,000 volumes. Every court known to our system of jurisprudence, both State and Federal, is held in Little Rock during each session of the school, except two (Supreme Court of the United States and Court of Claims at Washington), besides a large and eminent bar to draw our lectures from, which has manifested great interest in the school from the first.

Again, the associations and friendships formed with representative young men throughout the State are invaluable in many respects to the practitioner.

## EXAMINATIONS.

Written examinations are held each term in the presence of a member of the Faculty upon questions handed the student at the time, and on the merit of their papers students will be graded carefully.

Diplomas and degrees will be awarded by the Board of Trustees upon the recommendation of the Faculty.

Those of the Senior Class who attain a sufficiently high grade on their examinations will be entitled to the degree of Bachelor of Laws.

Every candidate for this degree is required to file with the Dean an essay or thesis upon some topic connected with his studies.

#### MOOT COURTS.

Moot courts are held from time to time during the term, in which students discuss cases previously assigned them for that purpose. These courts are presided over by the professor, who, at the conclusion, reviews the arguments and gives his decision upon the points involved. The effort here is to make not merely theoretical but practical lawyers; not to teach principles merely, but how to apply them. To this end, the moot court is made the forum for the discussion of such practical questions as most frequently arise in a professional career at the bar; and the attention of the students is directed not less to the application of the points discussed in actual cases, than to the elucidation of the legal questions. An opportunity is afforded all the Senior students to participate in this court, and to all Junior students of the second term.

Moot Courts are conducted on the theory that certain facts are true, and that the only subject open to discussion is the rule of law to be applied to them. The student, having obtained a statement of facts, is required to prepare pleadings, and draw up a brief in which the rules of law are stated under appropriate divisions and sustained by authorities which he proposes to rely upon in his oral argument.

The pleadings are submitted to the professor. He calls the student's attention to such errors as may exist, and gives such other practical information as he may deem advisable.

#### GOAR LYCEUM.

This society is composed of the students of this department, and meets regularly every Thursday night during the session.

All questions of interest to the members are discussed, and preference is shown for those legal in their nature.

This affords to the student that invaluable aid of learning "to think whilst on his feet," besides giving him an easy manner of address in public speaking.

#### PROFESSIONAL ETHICS.

While endeavoring to impart legal knowledge, the fact will not be lost sight of that a high moral standing is a most important requisite to a successful and honorable career, and no pains will be spared in impressing this fact upon students and inculcating a high tone of professional ethics and action.

For further information address

J. H. CARMICHAEL, Dean, Little Rock, Ark.

## BRANCH NORMAL COLLEGE.

PINE BLUFF, ARKANSAS.

#### FACULTY.

NORMAL DEPARTMENT.

J. C. CORBIN, A. M., Principal.

J. C. SMITH, A. B., First Assistant,

T. G. CHILDRESS, L. I., Second Assistant.

ANNA C. FREEMAN, L. I., Third Assistant.

LOUISA M. CORBIN, Fourth Assistant.

## MECHANICAL DEPARTMENT.

GEORGE M. PEEK, Superintendent.

W. S. HARRIS, Assistant Superintendent,

E. K. BRALY, Machine and Blacksmith Shops.

> LORENZO ELLIS, Engineer.

#### GENERAL STATEMENT.

The Branch Normal College is a department of the Arkansas Industrial University, established pursuant to an act of the General Assembly of the State of Arkansas, approved April 25, 1873, and has been in operation since September 27, 1875. Its primary object is the training of teachers for efficient service in the colored public schools of the State-the law referred to having been enacted with special reference to the "convenience of the poorer classes." For the purpose of carrying out the intent of the law, tuition is made free to all appointees, the only requirements for admission being suitable age and qualification, and appointment from one of the county judges, and the payment of the entrance fee of \$5. Other students pay, in addition to the above, \$1 per month in advance

## LOCATION, ETC.

The school property consists of a beautiful tract of 20 acres of ground, in the suburbs of Pine Bluff, Jefferson County, Ark., and a few rods from the junction of the Missouri Pacific and the St. Louis and Southwestern railroads. The school building, completed in 1881, and occupied January 30, 1882, is one of the handsomest educational edifices in the State, as well as one of the best, being steam heated, electric lighted and well ventilated. It contains one large assembly room, four recitation rooms, and cloak room for males and females. The building is of brick, with slate roof and trimmings of Alabama

granite, and cost, with improvements and furniture, \$12,000. The furniture and other equipments are of the best modern style.

The dormitory, a handsome brick building of seventeen rooms, and the Mechanical Department building, are upon the same grounds.

The Normal course of study is intended to be a full equivalent to a regular college course up to and including the Sophomore year, the only difference being the substitution of Pedagogy for Greek and the higher mathematical branches. The college course adds to this the usual studies of the last two years. Fourteen classes have graduated from the institution, and the members are now occupying prominent positions in life. The number of students for the year 1896-97 was nearly 200.

#### THE LIBRARY.

The library consists of over 3,500 volumes, embracing many valuable reference books, such as Appleton's Cyclopædia, Lippincott's Gazetteer, Century Dictionary, etc. It also has a fine collection of the works of standard authors—Shakespeare, Milton, Irving, Cooper, Dickens, Longfellow, Carlyle, Tennyson. The library of the principal, embracing many valuable text and reference books, including the Encyclopædia Britannica, is also accessible to students. A small collection of minerals, each of which is a typical specimen, and none of which are duplicates, has been procured. During the past year a valuable supply of apparatus has been added

to the educational resources of the institution, consisting of an air pump, electrical machine, standard barometer, batteries, French microscope, spectroscope, sets of weights and measures, common and metric, etc. The outfit of the Mechanical Department is not surpassed, if equaled in quality, by any in the State.

The Reading Room has been fitted up in clegant style and supplied with quite a number of valuable newspapers and periodicals, many of which are furnished by their publishers. Among those on file are the Freeman, Indianapolis; Western Appeal, Minneapolis; Gazette, Huntsville; The Gazette, Little Rock; Globe-Democrat and Republic, St. Louis; The Tyler, Detroit, Mich.; Popular Educator, Boston; Lippincott's Educational Quarterly, American Student, New York; Weekly Echo, Pine Bluff; National Baptist, Philadelphia; Southern Review, Helena; American Machinist, Scientific American, Popular Educator, Nation, the scientific publications of the State of Arkansas and of the United States, etc.

## DORMITORY FOR GIRLS AND BOARDING HOUSE.

The dormitory for female students is under the supervision of the principal and his wife. It is a handsome brick structure, sufficient for the accommodation of thirty or forty students. Board bills are payable monthly in advance, and no deduction is made for loss of time less than one week. Girls staying in the dormitory are required to keep their own rooms and the halls clean, and to assist in turn in the

dining room and kitchen. They are expected to furnish their own bed linen, and are held responsible for all damage to furniture in their rooms. They are not to visit each other's rooms, except by invitation from the occupant, and two are expected to occupy one room. They are not allowed to change rooms, nor to visit in town except by permission. The charge for board, fuel and light thus far has been \$8 per month, in advance, and, if possible, that price will be continued.

# DOMESTIC TRAINING, PLAIN NEEDLEWORK AND ART NEEDLEWORK.

The female students of the Institution have daily training in housekeeping, plain sewing and art needlework. This department is under the superintendence of Miss Louisa M. Corbin, a graduate of Ann Arbor, Mich. The department is equipped with a sufficient number of Wheeler & Wilson and Singer Sewing Machines and a liberal supply of all necessary accessories. Already the success of the department has been very decided, and it has had many specimens of fine work on exhibition. These students also receive daily instruction in typewriting from Professor T. G. Childress.

#### MECHANICAL DEPARTMENT.

The operations of this department are under the superintendence of Professor Geo. M. Peek, Superintendent of Mechanic Arts at Fayetteville, assisted by Professor W. S. Harris, a graduate of the Miller

Manual Labor School, of Virginia, and Professor E. K. Braly, a graduate of the Arkansas Industrial University.

The shop building was completed in February, 1892. It is of brick and covers a plat of ground 70x70, comprising a wood shop 35x35, a foundry 25x25, a blacksmith shop 25x25 and a machine shop 35x25; a boiler room 20x25 and a court 35x20 occupy the remaining space.

Wood Shop.—Twelve benches, with complete set of tools for each, a double circular sawing machine, scroll-saw, band-saw, shaper, carving machine, buzz-planer, pattern lathe, six turning lathes, and many necessary small tools make up the equipment in this department.

Foundry.—The equipment consists of a Colliau cupola, capacity 1½ tons of iron per hour, 12 sets of molding tools, flasks, Buffalo pressure blower, ladles, core-oven, scales, blast-meter, etc.

Forge Shop.—Twelve Buffalo forges are in position, the blast being supplied by a blower, and the smoke drawn off by a large exhaust fan. Besides the usual outfit of anvils, hammers, tongs, etc., there is a Buffalo punch shear and bar cutter capable of cutting off t-inch bar iron, ½x3-inch strap iron, or of punching a 38-inch hole in 38-inch iron.

Machine Shop.—The equipment consists of a 15-inch crank shaper, a 24x24x6 foot planer, a 20-inch drill press, a 15-inch by 5 foot turret lathe, a 14x6-inch engine lathe, a 12x5 hand lathe, universal milling machine, cutter and reamer grinder,

twist drill grinder, power grindstone, emery grinders, benches, vises, and all small tools necessary in machine shop work.

Heating and Power Plant — This consists of two vertical engines of 12-horse power each, two 30-horse power tubular boilers, and a 30-light dynamo. The piping for feed water is so arranged that the water passes from either pump or injector through a feed water heater to the boilers; and the exhaust piping is so arranged that the exhaust steam from the engines can be used either to heat the feed water or to heat the shops.

Water Supply.—In the court of the shop building is a 4-inch Cook tubular well which furnishes 1,000 gallons of water per hour, delivering it to a tank 30 feet above ground, holding 8,000 gallons.

Sanitary Provisions.—The shops are thoroughly well lighted, ventilated, heated and drained. Sewer connection is made to all buildings, and the abundant water supply is used to insure cleanliness in wash room and water closet.

The courses in the department are as follows, viz:

- (a) A course in general shop work, extending over three years, followed by a fourth years' work in one of the shops selected by the student. The design is to enable a young man to choose his trade intelligently and to acquire a sound basis for it.
- (b) A three year's course in general shop work followed by a fourth year's work in the management of boilers, engines and heating systems.

This course is intended to train young men for the practical work of foremen or engineers.

(c) A course in general shop work extending over three years, together with class-room work in the theory and practice of teaching, followed by a fourth year's work in handling classes in the shops and in laying out series of practical exercises.

For fuller information respecting this and other departments, reference is made to the catalogue of Branch Normal College.

#### GENERAL EXERCISES.

In addition to the regular class exercises prescribed in the course of study, there are regular lessons in vocal music, which are open to all the students. The general exercises also include a review of a Sabbath school lesson, review of the events of the week, calisthenics, music and drawing. Music upon instruments—the organ, piano, flute, guitar, etc.,—is extra, but very reasonable in price. There are two literary societies, the Junior and Senior, which hold weekly meetings and afford excellent opportunities for practice in oratory, debate and composition. It is required that every student shall become a member and attend the meetings of one of the societies.

The length of the vacation allows the advanced students an opportunity to engage in teaching, and a large proportion of their number have done so during the last five years. In nearly all cases they have given satisfaction and conduct their schools with a fair degree of success. The Normal students

have also assisted in the work of the institution itself as a part of their training.

It will be a great advantage to the institution if the various county judges will take a special interest in seeing that their counties are represented. The proper blanks for making the appointments will be furnished, together with all necessary information, on application to the principal.

J. C. CORBIN, A. M.,
Pine Bluff, Ark.



# CATALOGUE OF STUDENTS.

Abbreviations.—B. A., Bachelor of Arts; B. S., Bachelor of Science; C. E., Civil Engineering; E. E., Electrical Engineering; M. E., Mechanical Engineering; M. A., Master of Arts; M. S., Master of Science; S. E. E., Short Course in Electrical Engineering.

#### GRADUATES.

Name.	Course.	Post Office.	County.
McCain, William Ross	B. A	Little Rock	Pulaski.
Mock, Lucy Bird	.B. A	Prairie Grove	Washington.
Simonds, Alice Cary	B. S.	Fayetteville	Washington.
	SENIOR	is.	
Askew, George H	B. A	Magnolia	Columbia.
Ayres, Willis E	C. E.	Osceola	. Mississippi.
Bell, Marcus Laf yette			
Cummings. Robert Newtor			
Eld, Amanda Ann			
Graham, Richard Nelson			
Holcomb, Jobelle		*	-
McCain, William Ross			
Mitchell, James, Jr			
Nichols, George	. B. A	Helena	Phillips.
Price, Corley Gee			
Ross, William A	B. A	Boonsboro	Washington.
Smith, A. N			
Spencer, Eugene Leland	B. A	Fayetteville	Washington.
Williams, Hattie E	B. A	Fayetteville	Washington.
	JUNIOI	RS.	
Blair, John Henry	. C, E	. Decatur	. Benton.
Fillmore, Carlos			
Gates, Hugh William	. B. S	Fayetteville	Washington.
Howard, James Robert	. E. E	Malvern	Hot Spring.
Huie, Robert W., Jr	. B. A	Arkadelphia	Clark.
Kirby, Franklin Beverly	B. A	. Harrison	Boone.
Lackey, Dot.			
Owens, L. F			
Patterson, Hugh A			
Purdy, Lizzie			

Name.	Course.	Post Office. County.	
		Stuttgart Arkansas.	
Snapp, John H	C. E	Snapp Woodruff.	
		Fayetteville Washington.	
Stewart, Isaac Franklin	B. A	SpringdaleWashington.	
Thomason, Annie Cyna	В. А	Fayetteville Washington.	
Wilmot, John Castle	E. E	Rogers Benton.	
		Fayetteville Washington.	
Wood, Gay	B, A	Hot SpringsGarland.	
	SOPHOM		
Abernathy, George Carl	В. А	WarrenBradley.	
Barry, Katharine Berenice.	B. A	Fayetteville Washington.	
		Fayetteville Washington.	
		Walnut Ridge. Lawrence.	
		Van Buren Crawford.	
Brown, Edgar Thurman	C. E	. Sweet Home Pulaski.	
Burgess, Irene Gaynor	В. А	Fayetteville Washington.	
		Fayetteville Washington.	
Cannon, James Loudover			
Collier, May Thenie	Normal.	CarrolitonCarroll.	
Collier, James Thomas	B. A	Washburn Sebastian.	
Connelly, John Sydney	В. А	Poplar Grove Phillips.	
Crozier, Lizzie Ella	В А.	Dutch Mills Washington.	
		Dutch Mills Washington.	
Dickinson, Ruth May	B. A	Little Rock Pulaski.	
Dickinson, Thomas T	B. A	. Little Rock Pulaski.	
Easterly, Maud	Normal	Fayetteville Washington.	
Eld, George W			
		"Fayetteville Washington.	
Fletcher, William T., Jr			
		Fayetteville Washington.	
		. Fort Smith Sebastian.	
Goodwin, Walter L			
Gray, William Dodge	В. А	Little RockPulaski.	
Hatcher, John O	B. S	. Imboden Lawrence.	
		. Sulphur Rock Independence	
Hawthorne, Donald Kent	B. A	Jonesboro Crai, head.	
Horner, John Lyford	.B. A	HelenaPhillips.	

Name.	Course.	Post Office.	County,
Horsfall, Frank	. B. S	Hazen .	Prairie.
Howell, Edward			
Kerrott, Joseph B	B. A	Little Rock	Pulaski.
Kimbrough, Nestor D	Normal	.Van Buren	Crawford.
Kitchens, Waid Hampton			
Klyce, Horace S			
Lackey, Agnes Annie	B. A	.Fayetteville	Washington.
Leatherman, George P			
May, Mamie			
Means, Elmer D			
Meritt, Meah			
Moore, Benjamin L			
Morrow, Lulu			
Morrow, Annie B			
Neely, William S			
Orto, Charles Hector			
Philbeck, R. E			
Ross, Lucy Ida			
Rattenbury, William Hun			
Rosser, Virginia Fiorence			
Saxon, Robert E. L			
Sloan, Charles C			
Taylor, Daniel Webster			
Thomason, Demmie E.			
Tolle, F. A			
Towler, George F			
Treadway, William H			
Webster, Olive Sarah			
Wiley, Pearl E			
Young, Daisy			
37	FRESHM		0
Alden, Rathburn	B. A	Osage Mills	Benton.
Askew, Nancy Ellen			
Babb, Wroten E			
Bagley, Edward O			
Ballou, Willie May			
Beavers, Agnes			

Name.	Course.	Post Office.	County.
Berry, Elliott R	M. E	Bentonville	.Benton.
Blackwood, Herbert S	B. A	Auvergne	.Jackson.
Blaylock, John Charles	B\	.Lockesburg	Sevier.
Blaylock, John Charles Bostick, John A	B. A	Washington	. Hempstead.
Briggs, O. D	B\	Garner	White.
Bruton, H. L.	B. A	Belleville	Yell.
Buttram, J. Henderson	B. S	Pea Ridge	Benton.
Clark, Marvin D			
Clayton, John Middleton	В. Л	Eureka Sp 'gs	Carroll.
Cockrane, Victor Hugo	B. A	Gravett	Benton.
Cox, James Frank	C. E	Medford	Desha.
Crandell, Bonnie May	B. A	Harrison	Boone.
Davis, Pearl Reed	B. A .	Bonham	. Texas.
Davis, Benjamin F	B. A	Cherokee	Benton.
Droke, George Prentice	B\	Fayetteville	Washington.
Ellis, Gertrude	В А	Fayetteville	Washington.
Freeman, William Albert	B. S	Paris	Logan.
Gladson, Arthur J	Е. Е	Corning	Iowa.
Graves, Thomas Othello .	BA	Lockesburg	Sevier.
Hall, Edward Huntington	B. A	Pea Ridge	Benton.
Hamlin, Ivy	B. A	Fayetteville	Washington.
Hamilton, May Fort	. B. A	Fayetteville	Washington.
Hamilton, May Fort	.м. е .	Jonesboro	. Craighead.
Hawthorne, John H	B. A	Jonesboro	Craighead.
Henderson, Sam Lenow	B. A	Fayetteville	Washington.
Hill, Hinda Augusta	B. A	Fayetteville	Washington.
Hobbs, William D	В. А.	Bentonville	Benton.
Holt, John Albert			
Howard, Fred A	B\	Boston	Mass.
Hudgins, W. H	.M. E	Dallas	.Polk.
Hutt, Isaac N	В А	Roberts	Miller.
Jones, Doswell	E. E	Fayetteville	.Washington.
Kell, Bessie M	B. S	Fayetteville	.Washington.
Knott, Elmer	B. A	Bentonville	.Benton.
Langiora, bertram w	D+ А	bentonville	. Denton.
Lewis, Linneaus L			
Maddox, W. Bascom			
Martin, C. B	B. S	.Fort Worth	.Texas.

Name.		Post Office.	
Martin, Edward Gault	B. A	Little Rock	Pulaski.
McAndrews, Joe A			
McNeill, Leslie	E. E	Fayetteville	Washington.
McRae, Carleton	C. E	Mount Holly	Union.
Means, John Harvey	B. A		Calhoun.
Medlin, Robert G	Normal	.Van Buren	. Crawford.
Meritt, May	B. A	Fayetteville	Washington.
Mesler, Rector D			
Middleton, Robert J	C. E	Fayetteville .	Washington.
Mundt, Leo Joe	B. A	Helena	Phillips.
Murray, Worth J	. M. E	Норе	.Hempstead.
Newman, Leroy F			
Norman, Percy			
Oliver, Bessie	B. S	. Fayetteville	Washington.
Oliver, Cora			
Pettigrew, Lillian	B. A	Fayetteville	Washington.
Pettigrew, George A	В. А	Charleston	. Franklin.
Philips, Mabel Gertrude			
Pickren, Harry	B, A	Salem	Fulton.
Pittman, Charles	B. A	Prescott	Nevada.
Pittman, Daniel	B. A	Prescott	. Nevada
Pleasants, William E	В. А	Fayetteville	Washington.
Read, Florida	B. A	Fayetteville	. Washington.
Richardson, David A	B. A	Charleston	. Franklin.
Rodman, Evan Shelby	B. A	Altus	Franklin.
Ross, H. L	B. A	Boonshoro	Washington.
Sanders, Earle	B. A	Hot Springs	Garland,
Sellers, Calvin	B. A	Morrilton	Conway.
Shuler, George W	B. A	N. Lewisville	Lafayette.
Smith, William H	E. E	Siloam Spigs.	Benton.
Smith, James Roscoe	B. A	Etna	Franklin.
Smith, Fannie M	B. A	.El Dorado	Union.
Smyer, Charles L	B. A	Springdale	. Washington.
Staggs, P. T	B. S	Норе	Hempstead.
Stephens, George K	B. A	Newport	Jackson.
Taylor, Walter E	B. A	Holly Grove	Munroe.
Thweat, Oscar			
Tilley, H. L			

		Post Office. County.
Tilley, Mary	B. A	Fayetteville Washington.
Trimble, Thomas C., Jr	B. A	LonokeLonoke.
Valliant, Rigby D	B. A	Pine BluffJefferson.
Vaughan, A. J	B. A	Hindsville Madison.
Vincenheller, George A	B, S	Little RockPulaski.
Walker, Henry Owens	B. A	NewportJackson.
Walker, Arthur Lee	B. A	BellevilleYell.
Ware, Burton Pond	B. A	Hot SpringsGarland.
Wasson, Alfred W	B. A	Elm Springs Washington.
Watkins, A. L	B. A	BellevilleYell.
Wilkinson, Norman	B. A	Charleston Franklin.
Williams, Lilly	B. A	SearcyWhite.
Winn, Oscar Hunt	Normal	RussellvillePope.
Wilson, H. H		
Wolf, Artemus Floyd		
Wood, Albert Asbury	E. E	Albion
		Fayetteville Washington.
Woods, Mary Ethel	B. A	BatesvilleIndependence.
Worthington, J. A		
Worthley, Leighton E	B. S	. Helena Phillips.
Wright, George	B. A	Sulphur Rock. Independence.
	SPECIA	L.
Amos, George Luther	B. A	Charleston Franklin.
Derrick, Lee	B. A	. MariannaLee,
Erwin, Arthur T	B. S	Steedman Missouri.
Fishback, Herbert Yates	LE. E	Fort Smith Sebastian.
Jeffers, Solomon L	B. A	Mulberry Franklin.
Keel, John Hardee		
Long, Marguerite	B. S	Fayetteville Washington
Patterson, Katharine	.B. A	Fayetteville Washington.
Riddle, Emma Lucile.	.B. A	Clarksville Johnson.
Ross, Sue M	B. A	Boonsboro Washington.
Sanders, Carl F		
Turner, Berry Ellis	B. A	CypertPhillips.
		SpringdaleWashington.
0.		

<sup>\*</sup>Deceased.

#### MUSIC.

Name.	Course.	Post Office.	County.
Baldwin, Henry May	Vocal	Mansfield So	cott.
Ballou, Willie			
Byrnes, Bessie			
Byrnes, Emma Gertrude			
Curry, Clarence			
Davis, Pearl Reed			
Dickinson, Georgia			
Duncan, Annie C			
Elliott, Frank E			
Fancher, Mary Gertrude			
Gates, Hugh			
Haney, Ada May			
Isbell, Virginia A			
Kell, Bessie M			
Mayfield, Minnie			
Phillips, Mabel G			
Pitts, Rose Lee			
Purdy, Lizzie N			
Reynolds, Lenora	Vocal	. FayettevilleW	ashington.
Ross, Sue M	. Vocal	BoonsboroW	ashington.
Spencer, Susie	Vocal	FayettevilleW	ashington.
Vaughan, A. J.			
Vincenheller, Jeane			
A	RT DEPART	IMENT.	

Ballou, Willie MayWichita Falls	Texas.
Beavers, Virgil JosephineCharleston	Franklin.
Beavers, AgnesCharleston	Franklin.
Bennett, Mrs. Kate Watson. Newport	Jackson.
Blair, John Henry Decatur	Benton.
Campbell, William SPoughkeepsie	.Sharp.
Connor, Mrs. W. C Fayetteville	Washington.
Crandell, BonnieHarrison	. Boone.
Crozier, Lizzie Ella Dutch Mills	Washington.
Davis, Pearl ReedBonham	. Texas.
Dean, Madison HanksCenter Ridge	Conway.
Duncan, Mary Eleanor Fayetteville	.Washington.

Name.	Post Office.	County.
Earle, Clara	Fayetteville	Washington.
Ellis, Miggie .	Fayetteville	Washington.
Erwin, Arthur T		
Galloway, Rowena	Fayetteville	Washington.
Goodwin, Walter L	El Dorado	Union.
Hill, Hinda Augusta	Fayetteville	Washington.
Holcomb, Jobelle	Fayetteville	Washington.
Jeffers, Solomon	Mulberry	Franklin.
Kemp, Elsie		
Long, Marguerite		
Mathews, Lulu		
Mayfield, Minnie	Fayetteville	Washington.
Means, John Harvey.	Hampton	Calhoun.
Meritt, Nettie	Fayetteville	Washington.
Meritt, May		
Mesler, Rector D	Fayetteville	Washington.
Pettigrew, Lillian	Fayetteville	Washington.
Phillips, Mabel Gertr	ude. Fayetteville	Washington.
Prall, George Virgil	Jonesboro	Craighead.
Pugh, Julia Catherine	Fayetteville	Washington.
Purdy, Lizzie N	Fayetteville	Washington.
Rattenbury, Blanche	AFayetteville	Washington.
Rattenbury, William I	I Fayetteville	Washington.
Read, Florida	Fayetteville	Washington.
Reynolds, Lenora	Fayetteville	Washington.
Riddle, Emma Lucile.		
Rodman, Evan Shelby		
Ross, Sue M	Boonsboro	Washington.
Rosser, Virginia Flore	nceFayetteville	Washington.
Simonds, Alice Cary	Fayetteville	Washington.
Thomason, Annie Cyn		
Tilley, Mary	Fayetteville	Washington.
Wiley, Elizabeth		
Young, Daisy	Springdale	

### SUMMARY FOR SESSION 1897-98.

Graduates	3
Seniors	15
Juniors	18
Sophomores	58
Freshmen	103
Special	13
Music	
Art	46
None ( mate) Today	279
Names Counted Twice	59
Total	220
BY COURSES:	
Bachelor of Arts	140
Bachelor of Science	24
Bachelor of Mechanical Engineering	5
Bachelor of Civil Engineering	- 8
Bachelor of Electrical Engineering	14
Normal	6
Special Science	3
Special Arts	
Special Music and Painting	
7	
	220

# PREPARATORY SCHOOL.

SECOND YEAR CLASS,

Name.	Cours	e. Post Office.	County.
Alden, Minnie	G	Osage Mills	. Benton.
Anderson, Iva			
Babb, Effie	. G	Fayetteville	Washington,
Baker, Minnie	. G	. Fayetteville	. Washington.
Baldwin, R. F	Е	. Little Rock	. Pulaski.
Ball, C. C	. G	Ravenden	Lawrence.
Barton, R. B	. G	Mound City	. Crittenden.
Bates, J. R	. Е	Fayetteville	Washington.
Bates, W. E	. E	Fayetteville	. Washington.
Baxter, J. W	. G	llackett	. Sebastian.
Beavers, Virgile			
Bell, Margie	. G	Waldron	Scott.
Benton, J. L.	. G	Robinson	. Benton.
Berry, Mary	G	Marion	Cuttenden.
Berry, L. P			
Brooks, Effie	G	Fayetteville	. Washington.
Brown, F. I			
Buchanan, F. E	. E	Fayetteville	Washington.
Buchanan, H. E	G	Boonsboro	Washington.
Buchanan, Mary	. G	Boonsboro	. Washington.
Burgess, Myrtie			
Burton, P. D Campbell, A. J	G	Hope .	Hempstead.
Campbell, A. J	. G	Fayetteville	. Washington.
Campbell, W. S			
Cartwright, W. W	. G	Mountain View	Stone.
Christian, Otto	G ,	Springdale	Washington.
Clancey, W	. E	Fayetteville	Washington.
Clark, J. H.	. G	Goshen	. Washington.
Cleveland, Rhea	G	. Fayetteville	.Washington.
Cox, G. M	. E	Fayetteville	. Washington.
Craig, J. R			
Cunningham, B. L			
Curry, C. C.			
Davies, Edith			
Dorsey, C. C	E	Fayetteville .	. Washington.

					County.
Dotson, J. A	G	Hui	itsville		Madison.
Dowell, J. E	Ε	Fay	etteville		Washington.
Droke, Lelia	G	Fay	etteville	******	Washington.
Duncan, Anne					
Dunn, J. L	E	Fay	etteville		Washington.
Dunn, W. F	G	Fay	etteville		Washington.
Dykes, J. A	E	Kin	gsland		Cleveland.
Eichelberger, Fannie	G	Spar	ta	4	Missouri,
Ellis, W. Y	Ε	Fay	etteville		Washington.
English, J. A	G	Dute	ch Mills		Washington.
English, Laura	G	Dute	h Mills		Washington.
Evatt, Estella	G	Wal	dron		Scott.
Fancher, Mary C	G	Berr	yville	(	Carroll.
Galloway, Rowena	G	Fay	etteville		Washington.
Gray, J. W.	G	Hic	kory Va	lley :	Independence
Gray, J. W Gray, R. A	G	Altu	b		Franklin.
Grittin, Genevieve	G	Fay	etteville		Washington.
Hagood, Mattie					
Haney, Ada	G	Ben	tonville.		Benton.
Harris, Jettie	G	Fay	etteville		Washington.
Harrison, E. O	Ε	Fay	etteville		Washington.
Hendricks, J. T	G	Wal	laceburg	ζ :	Hempstead.
Herron, Byron	G	Jers	ey		Bradley.
Hight, W. G	Ε	Fay	etteville		Washington.
Hill, H. B					
Hill, Ethel					
Howard, R. E.	G	Mar	ianna		Lee.
Isbell, Virginia	G	Fay	etteville		Washington.
Jenkins, W. J	G	Litt	le Rock		Pulaski.
Johnston, J. E					
Jones, J. A					
Jones, O. E	G	New	port		Jackson.
Jones, Effie					
Jordan, Nellie	G	Fay	etteville		Washington.
Kantz, Willie	G	Fay	etteville		Washington.
Kelley, E. L	G	Gos	hen		Washington,
Klyce, D. E	Е	Fay	etteville		Washington.
Knesal, Ada	G	Fay	etteville		Washington.
		,			9

Name.	Cou	rse. Post Office.	County.
Lake, Horton	. G	Fayetteville	. Washington.
Lawrence, J. F	. E	Greenwood	Sebastian.
Leverette, E. W	. Е	Fayetteville	Washington.
Little, Paul	. G	Greenwood	Sebastian.
Little, J. E	G	Greenwood	. Sebastian.
Littlejohn, H. N	. G	Evansville	.Washington.
Long, Charley	G	Corning	Clay.
Maguire, Eva	G	Fayetteville .	Washington.
Martin, J. L.			
Martin, A. J	. G .	Batesville	Independence.
Massie, C. H	G.	Fayetteville	.Washington.
McCartney, Stella	. G	Fayetteville	Washington.
McNeil, Jessie	G	Fayetteville	Washington.
Moore, J. C	. G	Charleston	Franklin.
Morgan, W. S	G.	Wagoner	Indian Territy.
Morrow, Inez	. G .	Fayetteville	.Washington.
Norman, W.S	. G .	Fayetteville	.Washington.
Parks, Bessie	. G .	Boonsboro	Washington.
Payne, D. G	Ε.	Fayetteville	.Washington.
Phillips, C. O	G.	Fayetteville	.Washington.
Potts, T. O	$^{\rm E}$	Paris .	Logan
Prall, G. V	( ;	Jonesboro .	Craighead,
Pugh, Kate	. G .	Fayetteville	.Washington.
Pyeatt, H. R			
Randall, C. C	Ε.	Kansas City	Missouri.
Rees, Walter	. Е	Fayetteville	.Washington.
Robertson, J. M	G.	Farmington	Washington.
Root, Cleo	G .	Fayetteville	Washington.
Sanford, Emma			
Searcy, F. J.	( i	Buckner	Columbia.
Sedwick, T. D	G.	Fayetteville	Washington.
Shaw, J. M	G.	Sheridan	Grant.
Shuler, R. N			
Smith, O. R			
Smith, Carl			
Stephens, C. R	G	Enterprise	Sebastian.
Stone, S. K			
Sutton, Mabel	. G .	Fayetteville	Washington.

		Post Office.	
Thurman, J. E			
Thurman, I. W	E Silo	am Springs	Benton.
Tilley, Ada	G Fay	etteville	Washington.
Turner, J. C	E (yp	ert.	Phillips.
Underwood, Roy			
Vaulx, Eleanor	. GFay	etteville	Washington.
Vaulx, Susie E	. GFay	etteville	.Washington.
Wade, L. A	GFay	etteville	.Washington.
Waddell, J. B	. GPari	is	Logan.
Walker, J. W	GHin	dsville	.Madison.
Watkins, G. A	Е Fay	etteville	Washington.
Webster, Fay	E Mar	vell .	Phillips.
White, May	GFay	etteville	Washington.
Wilson, W. O			
Wood, Mattie N	. GFay	etteville	. Washington.
Wood, W. W.	E Hai	npton	. Calhoun
	RST YEAR		
Adams, E. A	. ELov	vell	Benton.
Austin, W. S	. G Gra	vett	Benton.
Austin, Nancy	. GGra	vett	. Benton.
Baker, Ida R	. G Fay	etteville	Washington.
Baldwin, H	G Mai	nsfield	. Sebastian.
Ball, Minnie B	. GMai	nsfield	Sebastian.
Baum, H	GFay	etteville	.Washington.
Benham, A. S	EMar	ianna	Lee.
Blain, Helen			
Blain, Mary	G. Fay	etteville	Washington.
Blanchard, C. P	. E Fay	etteville	Washington.
Boozer, Calla			
Brooks, F. M			
Brooks, Marguerite			
Brownfield, May	GMai	ria <b>nna</b>	. Lee.
Brownfield, Eleanor			
Buzbee, A. K			
Byrnes, Bessie			
Byrnes, Emma			
Carter, Elmo			

Name.	Co	Lamar	County.
Cazort, Vivian	G	Lamar	Johnson.
Chamblis, G	Е	Boughton	
Cobb, L. A	(;	St. Louis	Missouri.
Cowdrey, E. E	G	Yellville	Marion.
Davies, Mary Lou	G	Fayetteville	.Washington.
Davies, W. Z	Е	.Fayetteville	Washington.
Davis, Lucy E	G	Fayetteville .	Washington.
Davis, F. Hill	(;	Lowell	Benton.
Davis, E. A	, G	Fayetteville	Washington.
Dean, M. H	$\mathbf{E}$	Center Ridge	.Conway.
Dean, M. H Dibrell, J. L	E	Little Rock	.Pulaski.
Dickinson, Georgia			
Dumas, C. R	G	Lisbon	.Union
Dunlap, S. P	Е	Farmington	Washington.
Eason, Bessie	G	Fayetteville	.Washington.
Edmiston, J. C	G	Boonsboro	.Washington.
Edmiston, Maude	. G	Boonsboro	.Washington.
Eichelberger, Grace	. G	Sparta	Missouri.
Elliott, F. E	E	Hot Springs	Garland.
English, Artelee	. G	Dutch Mills	.Washington.
Fender, C. P			
Ferrell, S. A	E	Palestine	St. Francis.
Fleming, P. A	G	Marianna	Lee.
Frazier, Ada			
Garland, M. H	G	Augusta	.Woodruff.
Gibson, F. I.	. G	Dardanelle	Yell.
Gocio, Joseph			
Graham, R. B			
Green, C. B	G	Blanchard Sp'gs.	Union.
Guilliams, Georgia	G	Farmington	.Washington,
Hall, S. N			
Hall, R. L.			
Ham, H. H			
Hamblin, W. H			
Hanesworth, May			
Hannah, C. W			
Harris, H. L			
Harvey, W. R	G	Marshall	Searcy.

Name.		Post Office.	
Hellums, C. G			
Henry, N. R.	G	Bentonville	Benton.
Hill, V. D	G	Fayetteville	Washington.
Hinds, F. J	G	Rogers	Benton,
Holcomb, F. P	Е	Fayetteville	Washington.
Holcomb, J. R	Е	Springdale	Washington.
Horn, H. M	G	Marshall	Searcy.
House, J. W	G	Augusta	Woodruff.
Hudgins, J. G			
Hudgins, Bessie M			
Humphries, H			
Jackson, W			
Jenkins, Mary			
Jenkins, Jennie	G	Little Rock	Pulaski.
Jones, R. A	G	Hot Springs	Garland.
Jones, Minnie	G	Fayetteville	Washington.
Jordan, Grace	G	Fayetteville	Washington.
Kennerly, R. C	G	Sulphur Rock	Independence.
Key, K. C	G	Elm Springs	Washington.
Kimbrough, W. W	G	Dutch Mills	Washington.
Kindrick, E. L			
Kitchens, W. L	G	.Waldo	Columbia.
Klyce, H. K	E	.Fayetteville	Washington.
Laughinghouse, Elouise			
Leinen, John			
Lester, L. Roy			
Lewis, James			
Magness, A. C	G	Sulphur Rock	Independence.
Martin, L. R	G	.Warren	Bradley.
Marshall, H. E	G	Mansfield	Sebastian.
Mathews, Lula			
McClinton, T. H	G	Springdale	.Washington.
McKean, J. P	E	De Queen	Sevier.
McVay, Mattie			
Means, Walter			
Merritt, Nettie			
Moore, J. A	Е	Atkins	Pope.
AlU-11			

Name.	Course.	Post Office.	County.
Name. Mooring, D. C	E	Cotton Plant	Woodruff.
Murphy, P. E	E	Elliott	Ouachita.
Neeley, J. E	G	Fayetteville	. Washington.
Nettleship, W. L			
Niman, Vienna	G	Farmington	Washington.
Niman, Verbena	G	Farmington	Washington.
Ogden, W. H	G	. Springdale	.Washington.
Parker, Mary			
Pelt, Loui			
Pitts, Rose Lee	. G .	. Dover	Pope.
Pond, Kate			
Potts, C, A			
Potts, H. A			
Prather, G. G			
Pratt, C. L	Е	Springdale	.Washington.
Pryor, W. A			
Pryor, R			
Quarles, T. R			
Read, W. L			
Rees, Marguerite			
Robinson, L. M			
Ross, Jennie			
Rosser, Annie			
Rosser, W. B			
Sarver, Laura E			
Shuler, Joseph N			
Shull, W. O			
Spivey, R. E	G	Cotton Plant	Woodruff.
Stotts, T. M			
Strickland, J. S	E	DeQueen	Sevier,
Thompson, J. F			
Thompson, O	. E	Success	Clay.
Vandeventer, E. A	G	Fayetteville	Washington.
Waldrop, G. E			
Williams, R. F			
Williams, Willie			
Wood, J. A			

# PREPARATORY SCHOOL.—Concluded.

#### SUMMARY FOR SESSION OF 1898-99.

#### BY CLASSES.

Second year	.127
First year	
	~
Total	.258
BY COURSES.	
Engineering	62
General	196
	_
Total	258
GENERAL SUMMARY, 1897-98.	
Preparatory Students	258
Collegiate Students	-
Total at Fayetteville	
Medical Students (Little Rock)	102
Law Students (Little Rock)	. 26
Branch Normal Students (Pine Bluff)	184
Grand total	790

# ALUMNI ASSOCIATION.

The object of this association is to maintain the interest of the graduates in the institution and bring them into closer relation with the University. To this end all graduates are considered members. The association holds meetings annually during commencement week. The officers of the association for 1894 are:

J. N. TILLMAN, President.
MISS MATTIE PATTON, Secretary.

Committee on Banquet:

J. V. WALKER, G. W. DROKE, MRS. J. F. MAYES,

MISS JESSIE CRAVENS.

Committee on Speaker:

J. F. Mayes, Dr. A. S. Gregg, B. F. Wood.

#### LIST OF ALUMNI.

Don C. B. Aiken, C. E., '89, Eng. Dep., Johnson Company, Johnston, Pa.

Edna Allen, B. A., '96, Farmington, Ark.

L. S. Anderson, B. L. L., '84, clerk in land office, Washington, D. C.

J. D. Arbuckle, B. A., '92, Principal Public Schools, Magazine, Ark.

C. F. Armistead, B. A., '93, Captain Arkansas Volunteers, U. S. A.

L. R. Ash, C. E., '93, Professor Mathematics, Coe College, Cedar Rapids, Ia.

W. H. Askew, B. A., '97, Magnolia, Ark.

Ida Barr B. S., '96, Fayetteville, Ark.

C. P. Barnett, B. E. F., '96. Electrical Engineer, Fayetteville, Ark.

C. O. Bates, A. B., '83, 1 rofessor of Chemistry, Coe College, Cedar Rapids, Ia.

#### LIST OF ALUMNI, - Continued.

J. H. Bates, B. A., '86, Lawyer, Corsicana, Tex.

Mary Beattie, B. A., '90, Teacher, Deaf Mute School, Little Rock, Ark.

J. C. Bell, B. A., '94, Medical Student, Memphis, Tenn.

Nettie Barnett, B. L., '76, Mrs. C. E. Boles, Fayetteville, Ark.

Blanche Bibb, B. A., '93, Fayetteville, Ark.

J. W. Black, B. A., '92, Lawyer, McAlester, I. T.

W. J. Blackwell, B. C. E., '92, Engineer, Golden Lake, Ark.

Nora Blakely, A. B., '78, Mrs. H. M. Hudgins, Fayetteville, Ark.

W. P. Booth, A. B., '82, Farmer, Reyno, Ark.

Alice Borden, '77.

\*Laura D. Botefuhr, '75, Mrs. G. W. Schulte, Fort Smith, Ark.

Preston Bowles, B. C. E., '88, Kansas City, Pittsburg and Gulf Railway, Lake Charles, La.

W. E. Boyd, A. B., '96, Law Student, Cooper, Tex.

Amanda Braly, B. S., '96, Washington, D. C.

Etta Braly, B. S., '96, Washington, D. C.

E. H. Braly, B. A., '94, Land Office, Harrison, Ark.

E. K. Braly, M. E., '97, Capt. Ark. Volunteers, U. S. A.

O. P. Brewer, B. S., '93, Webber's Falls, I. T.

A. M. Brixey, B. A., '96, Lawyer, St. Louis, Mo.

W. D. Brown, A. B., '82, Physician, Newtonia, Mo.

J. W. Butler, A. B., '79, Real Estate Agent, Washington.

J. L. Campbell, B. A., Teacher, Greenwood, Ark.

\*E. B. Carden, B. L., '77.

\*Ella Carnall, A. M., '81.

A. H. Carrigan, A. B., '82, Lawyer, Washington, Ark.

Ann E. Carson, '75, Mrs. Jno. Knight, Jonesboro, Ark.

Augusta O. Carson, '75, Mrs. T. W. Cline, Downey, Cal.

C. K. Chanslor, A. B., '82, Lawyer, Grant's Pass, Ore.

W. R. Cherry, A. B., '82.

Jessie Cravens, B. L. L., '83, Instructor in Elocution, Arkansas Industrial University.

A. B. Crozier, E. E., '97, Eureka Electric Light Plant, Eureka Springs, Ark.

Wm. N. Crozier, B. A., '88, Missionary to China.

Lula Curry, B. S., '92, Mrs. G. L. Teller, Fayetteville, Ark.

Mike Danaher, B. A., '88, Lawyer, Ozark, Ark.

Hadge Davies, B. A., '93, Instructor in Anglo-Saxon and English Literature, Augusta Female Seminary, Staunton, Va.

Lila Davies, B. A., '96, Teacher, Greenwood, Ark.

Lizzie P. Davis, '75, Mrs. R. C. Brown, Florence, Arizona.

W. E. Dixon, B. A., '88, Teacher in Waldo, Ark.

C. H. Drake, B. C. E., '91, Engineer with J. A. C. Waddell, Kansas City, Mo.

N. F. Drake, B. C. E., Professor of Geology and Mining, Imperial University, Tien-tsin, China.

C. J. Drees, B. E. E., '96, Edison Electric Company, Little Rock, Ark.

G. W. Droke, A. M., 'So, Professor of Mathematics, Arkansas Industrial University.

W. H. Duncan, B. L. L., '84, Lawyer, Conway, Ark.

Mallie Dyer, B. A., '94, Professor of English and German, Florida State College, Tallahassee, Fla.

Clara Earle, B. A., '96, Instructor in English and Modern Languages, Arkansas Industrial University.

\*W. L. Edmiston, B. L. L., '84.

C. J. Eld, B. C. E., '96, Engineer, Richmond, Mo.

F. W. Ellis, A. B., '81, Lieut. U. S. Army, Fayetteville, Ark.

W. W. England, A. B., 83.

L. F. Fishback, B. S., '89, Lawyer, Wichita Falls, Tex.

J. C. Floyd A. B., '79, Lawyer, Yellville, Ark.

W. M. Flynn, B. A., '88, Teacher, Kennedale, Tex.

J. R. Gannaway, B. A., '90, Lawyer, Member Legislature, Warren, Ark.

D. A. Gates, A. B., '84. County Judge, Desha County, Arkansas City, Ark.

J. E. Gibson, M. E., '94. Civil Engineer, Philadelphia. Pa.

W. P. Goodwin, B. L. L., '84, Lawyer, El Dorado, Ark.

Belle L. Gorton, A. B., '76, Author, Chicago, Ill.

C. D. Greaves, A. B., '83, Lawyer, City Attorney, Hot Springs, Ark. \*Alfred W. Gregg, A. B., '76.

Andrew S. Gregg, A. B., '78, Physician, Fayetteville, Ark.

L. W. Gregg, A. B., '82, Lawyer, Fayetteville, Ark.

C. E. Hall, B. C. E., '93, Civil Engineer, Russellville, Ark.

H. J. Hall, B. A., '94, State Senator, Waldron, Ark.

#### LIST OF ALUMNI, - Continued.

W. J. Hamilton, B. A., '92, Lawyer, McAlester, I. T.

Agnes Harris, A. B., '76, Mrs. Johnson, Kansas City, Mo.

Sara E. Harris, A. B., '76, Mrs. C. P. Conrad, Osceola, Mo.

Grace Harrison, B. S., '89, Mrs. T. L. Brown, Greenwood, Ark.

J. H. Harrod, A. B., '79, Lawyer, Little Rock, Ark.

J. C. Hart, A. B., '85, Lawyer, Dardanelle, Ark.

J. T. Hawkins, '79, Physician, Mount Holly, Ark.

J. D. Head, B. A., '94, Deputy Circuit Clerk, Little River County, Columbia, Ark.

I. G. Hedrick, B. C. E., '92, Civil Engineer, Kansas City, Mo.

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Note -The President will be pleased to receive information as to the address and occupation of those members of the Alumni for whom these data are wanting. The Alumni are especially requested to give notice of any omissions or errors in the foregoing list.



<sup>\*</sup>Deceased

# SCHEDULE OF COLLEGIATE RECITATIONS.

Figures to the left show the term during which the subject is studied; those to the right show the number of the course.

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	1. 8:459:45	2. 9:45 10:45	3. 10:45 11:45	4. 11:45 12:45	5. 1 2	6. 2 3	7. 3	8. 45
RESHMAN.	Chemistry I, M., F Geology I, T., Th Latin I, M., W., F	French 1, T., Th., F	Mathematics 2, M., W. F	English I, M, W., F. Physics I, T., Th. Physics 2, M., F. Greek I, M., W., Th. F. Mathematics I, T., Th Mathematics 2, M., W., F.	I Agriculture I, M., W., F	English I, M., W French I, T., Th., F History I, M., W	Military Science, T	Drill, M., T. W
	Biology 1, T Physics 2, W Physics 3, M , F					Chemistry 1, W		
SOPHOMORE.	English 2, M., W., F	French 2, M., W	French 1, T., Th., F Greek 2, T., W., Th., F Mathematics 3 and 4, M—F	2 Chemistry 2, M., T, 1h. English 2, M., W	French 5, W. History 2, M., T., Th	Rotony I, M	Military Science, Th Zoology 1, F	Drill, M., T., W.
OPH			Botany I and 2, T., ThZoölogy I, M., W.					
S						Chemistry 3b, M., T., W., Th		
R.	Military Science, W	Entomology 1, F  German 1, M., W, F  Logic and Astronomy, T., Th., F.		History 4, T., Th Mathematics 5, M., W., F. Mathematics 6 & 7, T., Th. Economics 5 & 6, M., W. Anatomy, M., W.	1 Agriculture 3, T., Th 2 Hygiene, T	Latin 4, T., Th	English 3, T., Th Italian 1, M., W., F Spanish 1, M., W., F 2 Horticulture 3, M., W., F	Drill, M., T., W.
JUNIOR.					Entomology 1, M., W			
			Zoölogy 2, F			Chemistry 5, M., T., W., Th	-	
ENIOR.	Latin 5 and 6, M., W., F. Greek 5, T., Th	German 4, T., Th	I Psychology, T., Th., F.	German 2, T., Th., F Military Science, M	English 5, M., W., F. English 6, Th.	Geology 5, M., W	Spanish 3, T., Th Horticulture 4, T., Th	Drill, M., T., W.
SS	2 Bacteriology, T., Th	Economics 7 and 8, M., W., F			Zoölogy 5 and 6, T., Th.,	F		

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